AIR CAMPAIGN

# SUMATRA 1944–45

## The British Pacific Fleet's oil campaign in the Dutch East Indies

ANGUS KONSTAM | ILLUSTRATED BY EDOUARD A. GROULT

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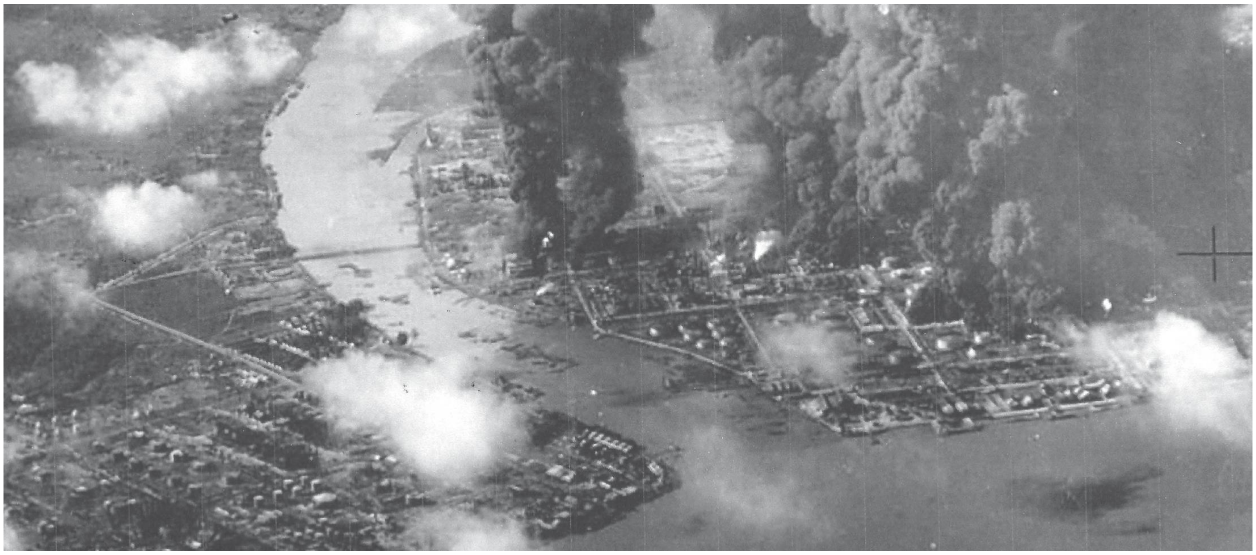
# INTRODUCTION

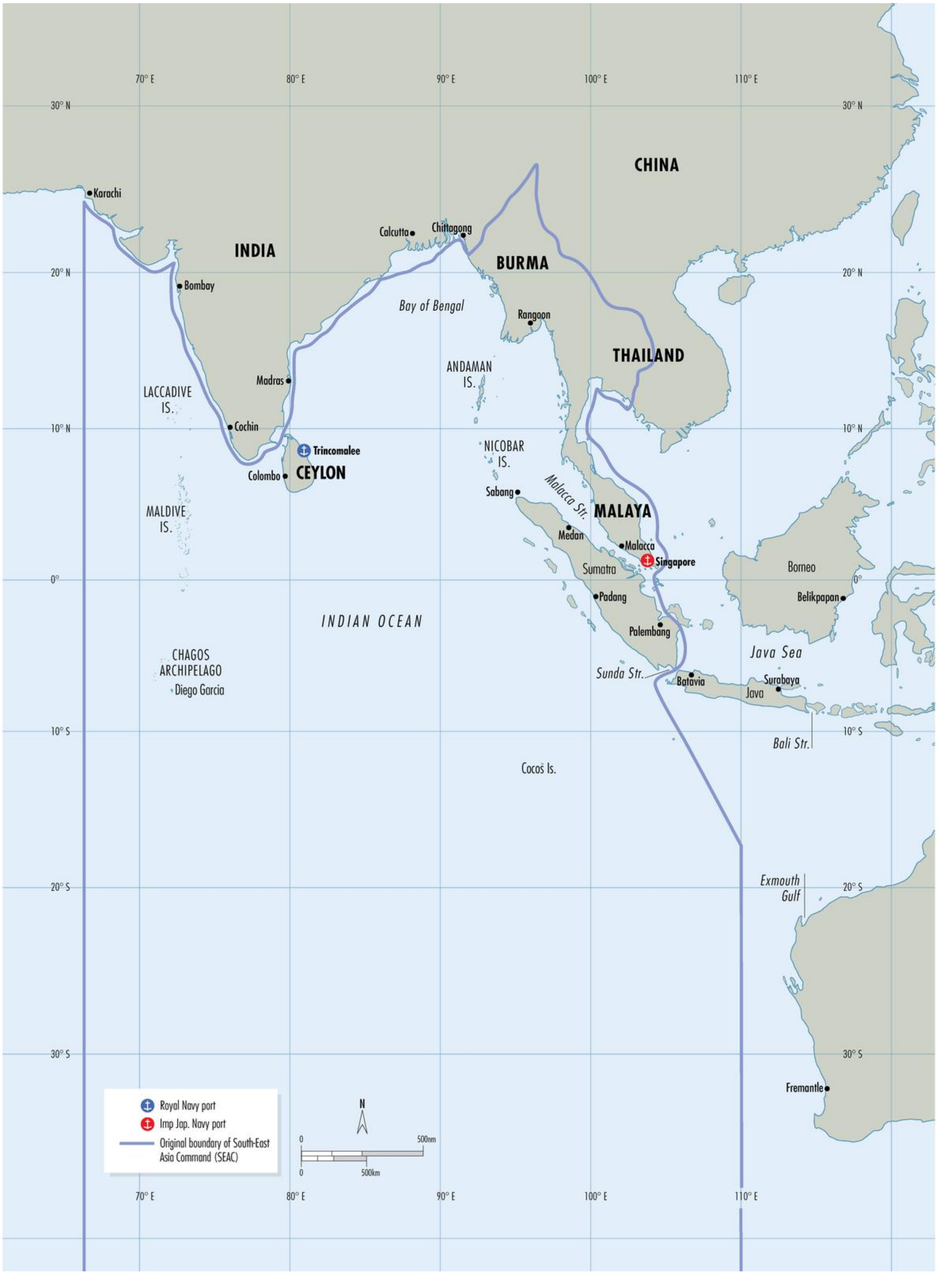
By the spring of 1944 the British Eastern Fleet had spent the best part of two years keeping out of trouble. Having barely weathered the Japanese raids into the Indian Ocean in 1942, it needed time to recover and to rebuild. Put simply, it lacked the strength to make a difference in the war raging in the Pacific. However, it couldn't be expanded before victory in the naval campaigns in the North Atlantic and the Mediterranean was assured. By early 1944 though, reinforcements began to arrive from home. These included the vital aircraft carriers, battleships and cruisers which the Eastern Fleet needed to finally go over onto the offensive. Eventually the bulk of Britain's carrier strike force were transferred to the Indian Ocean, so Somerville was able to plan operations which could make a real difference in the Pacific War. Eventually the fleet grew into the largest and most powerful naval strike force that Britain had ever assembled.



The most important targets in this air campaign were the two huge oil refineries in Palembang in southern Sumatra. Here, the largest of them, the Pladjoe refinery, is shown burning during the Operation *Meridian I* attack on 24 January 1945. The neighbouring refinery, Songei Gerong, was bombed five days later, in *Meridian II*.

When this began, the fleet commander, Admiral Somerville, was able to look at his strategic options, and develop a plan which dovetailed with the US Navy's much more extensive counter-offensive in the Pacific theatre. A scheme to recover Britain’s lost possessions of Malaya and Singapore was rejected, as both the British Prime Minister and the Admiralty wanted their fleet to be at the forefront of the naval campaign against Japan. So, Somerville was able to plan operations that would make a real difference in the Pacific War.

Inevitably, the core of the Eastern Fleet would be its increasingly powerful carrier strike force. It was decided that its first target would be the strategically vital oil fields in Japanese-occupied Sumatra, part of the Dutch East Indies. First, though, from April 1944, Somerville planned and carried out a series of operations designed to let his air crews gain experience of combat operations in the Pacific, and to weld his carrier strike force together into a thoroughly professional team. Somerville began modestly, with an attack on the small island of Sabang, off the northern tip of Sumatra. The attacks were then expanded, and the air campaign that unfolded would have a dramatic impact on Japanese oil production. Effectively, they helped cripple Japan’s fleet, at a time when it was locked in a climactic battle with the US Navy.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LACCADIVE IS.
Cochin
Trincomalee
CEYLON
Colombo
NICOBAR IS.
Sabang
Malacca Str.
MALAYA
Medan
MALDIVE IS.
Malacca
Singapore
Sumatra
Borneo
Padang
Belikpapan
INDIAN OCEAN
Palembang
CHAGOS ARCHIPELAGO
Java Sea
Diego Garcia
Sunda Str.
Batavia
Surabaya
Java
Bali Str.
Cocos Is.
Exmouth Gulf
Fremantle
Royal Navy port
Imp Jap. Navy port
Original boundary of South-East Asia Command (SEAC)
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500nm
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# THE INDIAN OCEAN, 1944–45

By August, large air strikes were launched against other key sites in Sumatra, including Padang, and from November on, the main target of Operations *Robson* and *Lentil* was the refinery at Pangkalan Brandan. By November, the fleet had been rebranded the British Pacific Fleet (BPF), and was led by Admiral Fraser. In late 1944 and early 1945 he finished the job, effectively ending Japanese oil production. So, Britain's strategic goal was achieved. The Sumatra raids were a prime example of how naval air power could achieve key strategic ends. By denying the Japanese fleet the fuel it needed to function, these naval air attacks helped bring about the collapse of Japanese power in the South Pacific. They also proved how the Allies could cooperate successfully – so paving the way for the Royal Navy's participation alongside the US Navy in the capture of Okinawa. This book tells the story of how this was achieved, by the most powerful concentration of Royal naval power ever assembled.

# CHRONOLOGY

## 1941

| | |
|---|---|
| **7 December** | Japanese attack on Pearl Harbor, commencement of war in the Pacific |
| **8 December** | Japanese invasion of Malaya; British Eastern Fleet created |
| **10 December** | Sinking of British Force Z in the South China Sea |
| **23 December** | Japanese commence attacks on Malay Barrier in the East Indies |

## 1942

| | |
|---|---|
| **1 January** | Formation of ABDA (American-British-Dutch-Australian) COM, to coordinate Allied defence in the region |
| **10 January** | Japanese begin invasion of Dutch East Indies |
| **14 February** | Japanese troops land in Sumatra |
| **15 February** | Singapore falls to the Japanese |
| **27 February** | Battle of the Java Sea – defeat of ABDA naval force |
| **28 February** | Battle of the Sunda Strait – destruction of ABDA naval force |
| **9 March** | Capitulation of the Dutch in Java |

| | |
|---|---|
| **28 March** | Japanese complete conquest of the Dutch East Indies, including Sumatra |
| **4–12 April** | Japanese raid into the Indian Ocean; withdrawal of much of the Eastern Fleet to East Africa |
| **May** | Eastern Fleet supports Operation *Ironclad* – the invasion of Madagascar |
| **4–7 June** | Battle of Midway – first major defeat of the Japanese Navy |
| **1 October** | Eastern Fleet attached to South East Asia Command (SEAC) |

## 1943

| | |
|---|---|
| | Gradual build-up of Eastern Fleet, based in Colombo in Ceylon (now Sri Lanka) |
| **August** | US 10th Air Force commences operations over Adaman Sea |
| **November** | Cairo Conference – Allied leaders decide emphasis for future naval operations will be in the Pacific theatre |
| **30 December** | Fleet carrier *Illustrious* dispatched from Britain, to join Eastern Fleet |

## 1944

| | |
|---|---|
| **28 January** | *Illustrious* joins Eastern Fleet – first element of new carrier strike force |
| **February** | Japanese Combined Fleet is relocated to Singapore |

| | |
|---|---|
| **1–9 March** | Japanese naval raid into Indian Ocean |
| **27–30 March** | Operation *Diplomat* – key training exercise between Royal Navy and US Navy, and operations against Japanese targets in Adaman Islands and Dutch East Indies |
| **19 April** | Operation *Cockpit* – Combined Allied air attacks on Sabang refineries |
| **17 May** | Operation *Transom* – Combined Allied air attacks on Surabaya refineries |
| **19 June** | Operation *Pedal* – Fleet Air Arm (FAA) air attacks on Port Blair |
| **19–20 June** | Battle of the Philippine Sea – major American victory over the Japanese fleet |
| **25 July** | Operation *Crimson* – FAA air attacks on northern Sumatra |
| **24 August** | Operation *Banquet* – FAA air attacks on Sigli and Padang |
| **7 September** | Japanese promise Indonesian independence in ‘near future’ |
| **17–18 September** | Operation *Light* |
| **17 October** | Operation *Millet* – FAA air attacks on Port Blair |
| **23–26 October** | Battle of Leyte Gulf – major victory over the Japanese fleet, effectively ending its offensive capabilities |
| **November** | Relocation of remnants of Japanese fleet to Okinawa and Japanese home ports |

| | |
|---|---|
| **22 November** | British Pacific Fleet (BPF) created from units of the British Eastern Fleet |
| **20 December** | Operation *Robson* – FAA air attacks on Sumatran refineries |
| **22 December** | The rump of the British Eastern Fleet replaced by British East Indies Fleet |

## 1945

| | |
|---|---|
| **4 January** | Operation *Lentil* – FAA air attacks on Sumatran refineries |
| **24 January** | Operation *Meridian I* – FAA air attacks on Palembang refineries |
| **29 January** | Operation *Meridian II* – FAA air attacks on Songei Gerong and Pladjoe refineries |
| **January** | BPF supports military landings off coast of Burma |
| **4 February** | BPF relocated to Sydney, Australia |
| **24 February** | Operation *Stacy* – FAA air attacks in support of naval sweep of Andaman Sea |
| **15 March** | BPF attached to US Third Fleet, under Admiral Halsey, and is redesignated Task Force 57 |
| **26 March–23 April** | Operation *Iceberg* – FAA air attacks in Central Pacific |
| **1 April** | Allies begin operations against Okinawa |
| **20 April** | BPF commences operations in support of Okinawa operation |

| | |
|---|---|
| **20 June** | Operation *Balsam* – FAA air attacks on northern Sumatra |
| **24–28 July** | TF-37 undertakes air attacks on Japan |
| **26 July** | Operation *Livery* – FAA air attacks on Malaya – escort carrier *Ameer* damaged in kamikaze attack |
| **6–8 August** | Atomic bombs dropped on Hiroshima and Nagasaki |
| **15 August** | Japanese Emperor announces surrender of Japan – VJ Day celebrated |
| **2 September** | Official Surrender of Japan in Tokyo Bay |
| **December** | British Pacific Fleet disbanded, and its ships transferred to the British East Indies Fleet |

Grumman Avengers of 849 NAS about to attack the Pangkalan Brandan oil refinery in north-eastern Sumatra during Operation *Lentil*, 4 January 1945. A first wave of rocket-armed Fireflies from 1770 NAS had attacked the refinery, and started the fires which can be seen over the target.

# ATTACKER'S CAPABILITIES

## The British Pacific Fleet

Throughout 1942 and 1943, when Britain's fortunes in the Far East were at their lowest ebb, the British government remained committed to a restoration of the situation in the Far East. This, though, was tempered by pragmatism. First, the naval situation in the North Atlantic and the Mediterranean had to be stabilized, and the dominance of Allied sea power re-established. Then, Britain would resume the offensive in the Far East, but only in cooperation with her American and Australian allies, and others. The events of 1941–42 had shown that in the Pacific theatre, air power was the key to victory. Any successful naval operations would therefore centre around the aircraft carrier, with surface units including battleships being relegated to a supporting role. This, then, meant building up the strength of the British Eastern Fleet, and particularly its reinforcement by fleet aircraft carriers.

The Chance Vought F4U Corsair, with its distinctive 'gull wing' appearance first entered service with the Fleet Air Arm in the summer of 1943, and proved more rugged and powerful than its British-built counterparts. During the Sumatran campaign Corsairs were embarked in HMS *Illustrious* (1830 and 1833 NAS) and HMS *Victorious* (1834 and 1836 NAS).

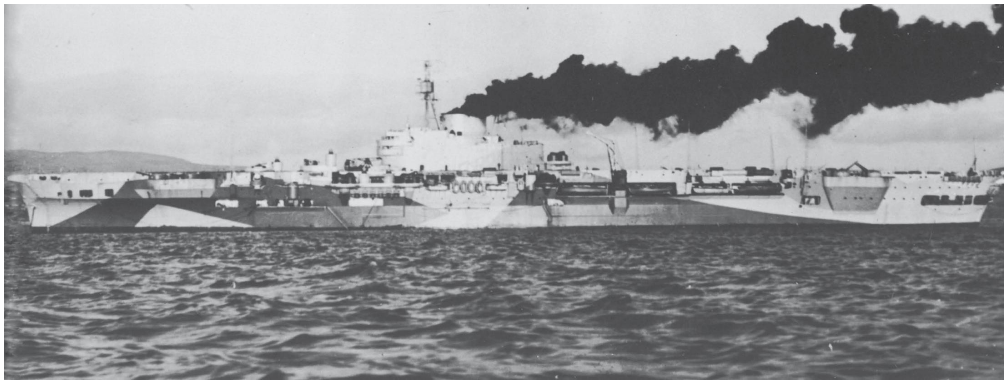
However, these were a very finite resource. Earlier campaigns had taken their toll, with three of them (*Ark Royal*, *Courageous* and *Glorious*) being lost, and several others damaged. The Royal Navy's air wing, the Fleet Air Arm (FAA), was also poorly served in terms of its aircraft. For the first years of the war the Fleet Air Arm embarked biplanes like the Fairey Swordfish or Fairey Albacore, or their more modern monoplane replacement, the Fairey Barracuda. Then, from 1941 on, American-designed aircraft became available, which were a marked improvement on their predecessors. By mid-1944, the Fleet Air Arm squadrons serving in the Eastern Fleet were equipped with these newer American aircraft, or with a new generation of British-designed and built fighters. The result was an air arm which had as much 'sting' as their American counterparts. The only problem was, they weren't embarked in the same numbers as in the carriers of their American allies.

During the Sumatran campaign the first British fleet carrier to take part was HMS *Illustrious*, namesake of her class, and sister ship of *Victorious* and *Formidable*. All but *Formidable* would see service with the Eastern Fleet or British Pacific Fleet during this campaign. These carriers displaced 28,620 tons when fully laden, and boasted an armoured flight deck – a major advance over the wooden decks used in contemporary American carriers. The drawback, though, was that this protection took up space which could otherwise be used to house aircraft. Still, in the Mediterranean in January 1941, *Illustrious* suffered seven bomb hits which would have sunk any other type of carrier. After patching her up, she was returned to active service. This Illustrious class of carriers was well-provided for with anti-aircraft defences and air search radar, and so were useful, modern and fairly well-protected vessels.

The two other carriers to join the Eastern Fleet or British Pacific Fleet during this period were *Indomitable* and *Indefatigable*. *Indomitable* was a modified version of the Illustrious-class fleet carriers. The major difference between them was that *Indomitable* had the armour protecting the sides of her hangar reduced, in order to allow her to accommodate more aircraft. Otherwise, this 29,730-ton carrier was of a broadly similar design to her half-sisters. *Indefatigable* was the second carrier of the Implacable class. Again, these were broadly similar to the Illustrious class in appearance, except they had longer flight decks – 720ft instead of 620ft in *Illustrious* and 670ft in *Victorious*, which meant that more aircraft could be ranged on her flight deck. Her only real drawbacks were her low hangar height, which meant she couldn't accommodate the Corsair, and she lacked the fuel stowage of the other British fleet carriers.

This inability to accommodate the Corsair in *Indefatigable* meant that, during this campaign, she carried the lighter and less-robust Seafire fighter instead. It lacked the range to escort long-range strikes in the way Corsairs and Hellcats could, especially if fitted with drop tanks. So, she tended to be retained to provide Combat Air Patrol (CAP) support over the carrier strike force, protecting them from the threat of enemy air strikes. Like the other British carriers, though, she was well-equipped with anti-aircraft guns, and by both surface search and air search radar. Also, by this stage of the war, radar was being used extensively in conjunction with air direction teams, who would coordinate all air activity, from the deploying of air strikes to the operations of the CAP.

What hindered the British, at least at the start of the campaign, was their lack of experience in conducting large multi-carrier operations. For the most part, in the naval campaigns fought in the North Atlantic and the Mediterranean the British had used their carriers either singly or in pairs, so their crews had no real experience in the deployment of large-scale air strikes, or even multi-carrier CAP screens. Fortunately, in the spring of 1944, thanks to Operation *Diplomat*, the crew of *Illustrious* had the chance to spend time operating with the US Naval carrier *Saratoga*. The Americans taught their British counterparts everything they knew about 'fast carrier' operations in the Pacific. This was a very different kind of naval warfare than anything the British had been used to; if they were to conduct multi-carrier operations of their own, and if they intended to work alongside their American allies, the British had to learn these skills, and then perfect them.



The Implacable-class fleet carrier HMS *Indefatigable* entered service in May 1944, and operated in home waters before being sent to join the Eastern Fleet that November, as Rear Admiral Vian's flagship. By that stage she embarked Seafires (857 and 894 NAS), Fireflies (1770 NAS) and Avengers (820 NAS).

PACIFIC POST
PACIFIC POST

In the British Pacific Fleet, seamen were kept abreast of developments in the theatre and at home by way of the *Pacific Post*, a free newspaper circulated throughout the fleet. This helped soften the blow of serving so far from home, at a point where the war in Europe was nearing its conclusion.

Essentially, ‘fast carrier’ operations were in development by the US Navy before America’s entry into the war in December 1941. This was perfected, however, in the aftermath of Pearl Harbor. At its heart was the premise that the aircraft carrier rather than the battleship was the offensive core of the fleet. A fast-carrier task force of two, three or four carriers would be able to protect itself from enemy air and surface threats. Other warships were essentially there to screen the carriers during air attack, and to protect them from enemy submarines. Now, instead of a naval engagement being decided by battleships, it would be won by air attacks on the enemy fleet, starting with its own aircraft carriers. This in turn meant developing skills in aircraft handling, carrier organization and the prompt forming up and sending off of both air strikes and CAP screens. It was a whole new kind of warfare, but it was one the US Navy perfected during a string of hard-fought carrier battles: Coral Sea, Midway, the Eastern Solomons and Santa Cruz. Now it was the turn of the British.

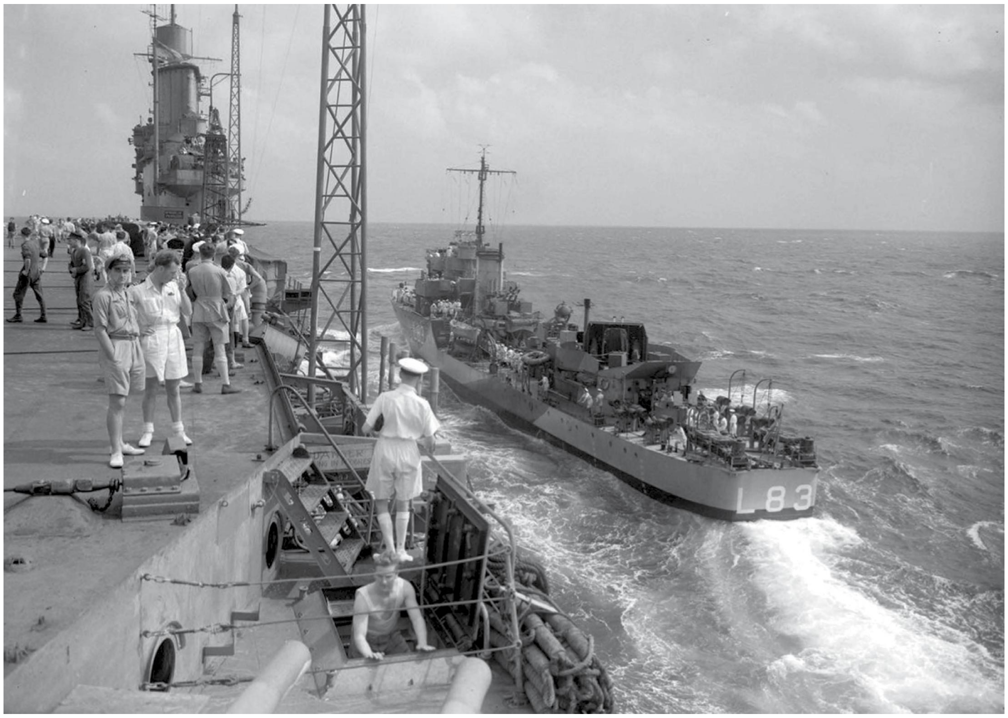
Fortunately for the air crews of *Illustrious*, *Saratoga* remained with her for two small operations. By the time *Saratoga* left the Indian Ocean the officers and men of *Illustrious* knew what was expected of them. Their job was to pass these new-found skills onto others – the crews of the other British carriers which arrived to reinforce them. Then, together, in a series of ‘working up’ operations – the Navy’s term for operational training – the British would perfect their grasp of ‘fast carrier’ operations through a series of attacks on Japanese targets on and around Sumatra. Once this training was completed, the fleet would go over onto the offensive, and show just what it had learned.

Of course, there were other differences too. For a start, operations in the Pacific were conducted over vast distances. That was true of the Indian Ocean, but it was far more so in the Central Pacific, where the British Pacific Fleet would eventually be heading. Until then, the British had usually operated within range of a friendly port. So, ships would return to port to refuel. While the Royal Navy had refuelled at sea before, this was very much seen as an option of last resort. It was also usually done after setting up refuelling rendezvous points, such as the fleet had done during Operation *Pedestal* – the relief of Malta – in the summer of 1942. Now, though, it would have to refuel at sea while underway – and yet another new skill had to be perfected before the fleet could operate effectively alongside its allies.

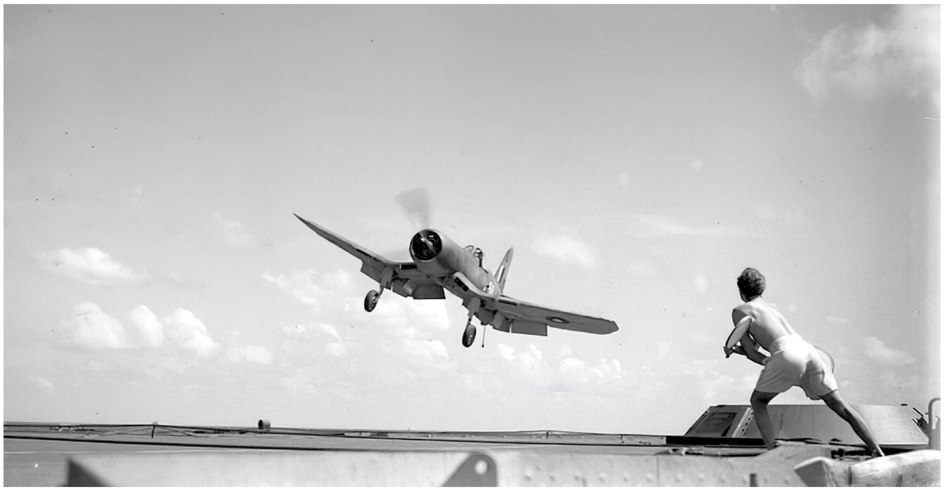
The other big difference was in the number of aircraft the British carriers could embark. In an Illustrious-class carrier, up to 33 aircraft could typically be carried. This was usually divided into equal numbers of fighters and strike aircraft. However, *Indomitable* could handle 45 aircraft, and *Indefatigable* up to 60, despite the hangar-height limitations that prevented her from embarking Corsairs. By contrast though, an older American carrier like *Saratoga* could carry 63 aircraft, while the newer Essex-class carriers managed to increase that to 91 aircraft. So, British airstrikes and CAP screens would by necessity be smaller than their American counterparts, and, therefore, to make the most of their squadrons, the Royal Navy really had to improve its game in terms of flight deck operations, aircraft handling and fighter control. This campaign then, would see the British carrier strike force develop steadily, until by January 1945 it had effectively mastered all of these skills.

Of the Fleet Air Arm’s new fighters which saw action in the Indian Ocean in 1944–45 two were British-designed, and two were American. The first of the British pair was the single-seater Supermarine Seafire, a light and highly manoeuvrable version of the standard RAF Spitfire, which could act as a fighter, a fighter-bomber or a reconnaissance aircraft. Its greatest weakness, though, was its fragility, making it prone to damage when landing, unless flown with excessive care. The Fairey Firefly was much larger, similar in size to the latest American-built fighters, but it was a two-seater fighter, which also had a strike capability, using bombs or rockets. It could also act as a reconnaissance aircraft. The American-built aircraft were the Chance Vought Corsair, a large and powerful single-seater fighter-bomber, and the single-seater Grumman Hellcat, a fighter-bomber which was slightly larger, and better armed. Both were superb aircraft, and would form the mainstay of the fighter wings of the British Pacific Fleet.

The main strike capability was provided by an American strike aircraft, which could double as a torpedo bomber, and a British-built multi-role strike aircraft, which was both dive bomber and torpedo bomber. The British Fairey Barracuda had a three-man crew, and could carry up to four 500lb bombs, or a single torpedo. However, it lacked the endurance of its American counterparts, and so was superseded by these American bombers during the Sumatra campaign. Its American counterpart was the Grumman Avenger, another three-seater aircraft, which could only carry four 500lb bombs or a single torpedo, although she could also replace them with a pair of 1,000lb bombs – something the Barracuda was unable to do. The Avenger could also be fitted with wing-mounted rockets. The Avenger, a bulbous, bulky aircraft, was also a robust one, and proved popular with its crew. During the Palembang raids, some crews even handled them almost as if they were fighters. These aircraft then, gave the British fleet carriers a respectable strike capability against shore-based targets.



Refuelling at Sea (RAS) was a fairly new procedure for the Royal Navy, as it was rarely necessary in operations in home waters or the Mediterranean. In the Indian and Pacific oceans, though, it allowed task forces to operate far from their bases. Here, an escort destroyer is pulling away from the carrier HMS *Illustrious* after a RAS operation in the Indian Ocean.



A Vought Corsair embarked in *Illustrious* pictured during its final approach to the carrier. The batsman has just signalled the pilot to cut his engine. His landing hook can be seen at the rear of the aircraft, ready to hook onto one of the arrester wires on the carrier's flight deck.

As well as carrier operations and aircraft, the 'working up' of the Eastern Fleet, and then the British Pacific Fleet, was also a matter of command. The fleet commander, Admiral Sir James Somerville and his successor Admiral Sir James Fraser, had to learn just how to use this newly-forged weapon. Although both were superbly capable commanders, with hugely impressive wartime records, neither had faced a challenge like this before. By the creation of Britain’s own fast-carriers, they were being handed an extremely potent force. Through this series of attacks in the Indian Ocean, they were learning how to use it, just as much as the air crews whom they commanded. This was also true of the carrier strike force commanders themselves, Rear Admiral Clement Moody and his successor Rear Admiral Philip Vian. Their American counterparts had learned how to handle a fast-carrier force in the crucible of the Pacific War. These British carrier force commanders would have to learn on the job, and essentially they had to do it quickly. After all, they only had this one air campaign waged over Sumatra to achieve this. That they both mastered it is a testimony to their professionalism, and the determination of them and their men.

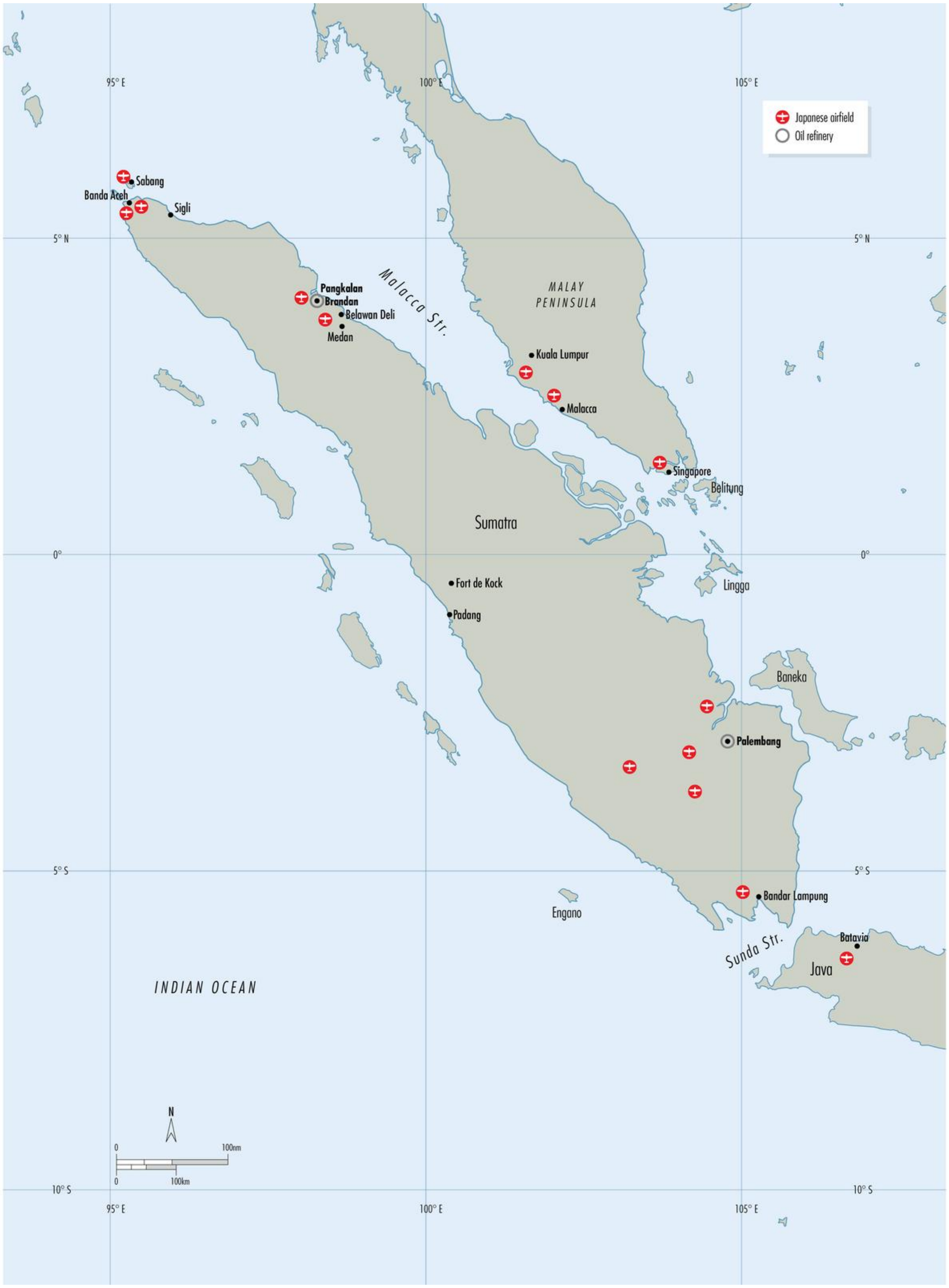
# DEFENDER'S CAPABILITIES

## The Japanese in Sumatra

Since the Japanese conquest of the island in February 1942, Sumatra was governed by a Japanese military administration. It and nearby Malaya were controlled by the Japanese 25th Army, commanded by Lieutenant General Tomoyuki Yamashita, which was based in Singapore. However, after a reorganization of the Japanese deployments and responsibilities in April 1942, the 25th Army was stripped of its other responsibilities, other than Sumatra and the smaller adjacent islands such as Sabang. From that spring until the end of the war, the headquarters of the army was moved to Fort de Kock (now Bukittinggi) in western Sumatra, halfway down the thousand-mile-long island on its western side. Although an army formation, the head of the 25th Army was also in charge of all air units in his area, and for the imposition of law and order over the Sumatrans. By the start of the air campaign in early 1944, the army was commanded by General Moritake Tanabe, who retained his command until the end of the war.

A Mitsubishi Ki-21 Type 97 heavy bomber, codenamed 'Sally' by the Allies. Six Ki-21 bombers attacked the British task force on 29 January 1945, as it lay off the western coast of Sumatra. All six of the bombers were shot down, either by the task force's CAP, or by anti-aircraft fire.

Neighbouring Java came under the jurisdiction of the Japanese 16th Army, whose headquarters was in the city of Batavia, the capital of the Dutch East Indies. By 1944 the army there, and the island’s air defences, were commanded by Lieutenant General Kumakichi Harada. In both Java and Sumatra, the main role of these army-level garrisons was the military occupation of the region, and the imposition of military rule over the civilian population. This latter role, though, was generally carried by the army’s *Gunsei* (‘Chief of Staff’), the deputy to the army commander. In the case of the 25th Army this post was held by Lieutenant General Yutaka Nishioeda. In October 1944, however, he was replaced by Major General Nakao Yahagi, who, like Tanabe, remained in his position until Japan’s surrender.


Japanese airfield
Oil refinery
95° E
100° E
105° E
5° N
0°
5° S
10° S
Sabang
Banda Aceh
Sigli
Pangkalan
Brandan
Belawan Deli
Medan
Malacca Str.
MALAY PENINSULA
Kuala Lumpur
Malacca
Singapore
Belitung
Sumatra
Lingga
Fort de Kock
Padang
Baneka
Palembang
Bandar Lampung
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Sunda Str.
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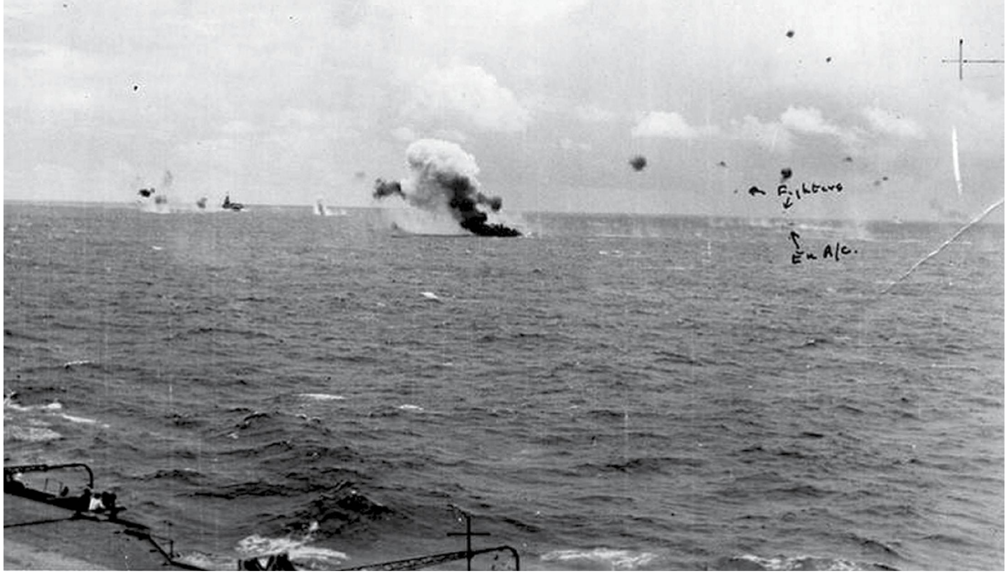
This military administration in Sumatra had wide-ranging responsibilities. These included the control of infrastructure, such as the administration of oil refineries, ports, roads and railways. In this they were supported by Japanese civil administrators, or by Indonesians. Sumatrans also assisted the Japanese in the civil administration of the island, and in supporting Japanese policing or security measures, essentially leaving the army command to concentrate on the defence of Sumatra from attack. This, effectively, meant the guarding of its coasts from invasion, with Australia being seen as the most likely direction of any attack. In addition, they supervised the establishment of coastal defences in key areas, the building and operation of military airfields and the provision of anti-aircraft defences in Sumatra and its adjacent islands.



A Ki-21 ‘Sally’ bomber is shot down during an attempted low-level bombing attack on the British task force off Sumatra, 29 January 1945. This impromptu air strike took place just as the returning strike from Palembang was landing back on the British carriers. The photograph analyst has also identified another Japanese bomber, and the Seafire fighters of the task force’s CAP screen.

There was also a naval element to the defence of the region. For the most part the naval defence of Sumatra was the responsibility of the area’s main regional naval command, the Imperial Japanese Navy’s 2nd South Fleet, which was based at Makassar (or Ujung Pandang) in the Celebes (Sulawesi), in the north-east corner of the Java Sea. However, Surabaya in Java was an important secondary naval base, used by Japanese anti-submarine forces, while there were smaller naval facilities at Sabang, off the north-east tip of Sumatra, on Bangka, an island off the south-eastern coast of Sumatra, at Dumai, in the centre of Sumatra's eastern coast, and at Port Blair in the Andaman Islands. For the most part, though, Allied naval operations against the Dutch East Indies would be countered by the Japanese fleet stationed in Singapore.

By February 1944 Admiral Koga Mine'ichi's *Rengo Kantai* ('Combined Fleet') was based there, having moved west from Truk lagoon, and it was from there that the fleet sortied to engage the US Navy in the Battle of the Philippine Sea and the Battle of Leyte Gulf. After that second defeat in October 1944, its survivors withdrew northwards to Okinawa. As a result, the Japanese naval presence in Singapore was reduced to smaller units such as cruisers and destroyers, which posed a relatively low level of threat to the British Eastern and Pacific Fleets. Of much greater threat to the British were the Japanese land-based air units stationed in the region, which even in 1944–45 were still substantial, and equipped with modern fighters, bombers and reconnaissance planes. This then, and the substantial anti-aircraft defences of Sumatra, would pose the greatest threat to British carrier operations during the air campaign that followed.

## Anti-aircraft defences

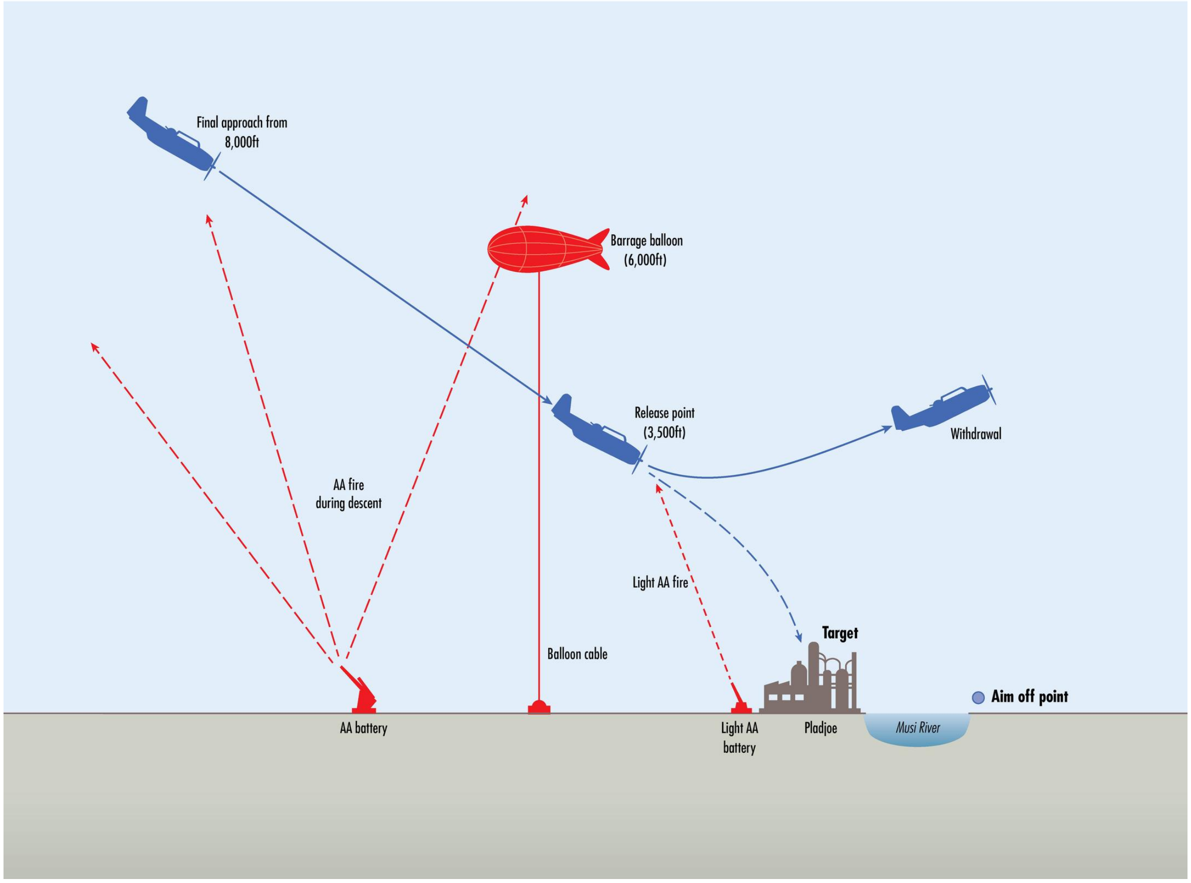
The Japanese administered several oil production and refining sites in Sumatra, including those near the north-east coast of the island at Pangkalan Susu and Pangkalan Brandan, and the refining and tanker hub a little to the south at Belawan Deli, the port serving the city of Medan. However, these were relatively small installations compared to the two sites at Palembang, in southern Sumatra. The Pladjoe and Songei Gerong facilities there not only processed four-fifths of the oil produced in Sumatra, but their produce accounted for a similar proportion of the fuel oil and aviation fuel used by the Japanese navy and air force. These two sites were of a key strategic importance to the Japanese war effort. The Japanese, of course, were well aware of this, and so when the anti-aircraft (AA) defences of Sumatra were placed under one command in March 1943, its headquarters would be in the city of Palembang.

This command, the Palembang Air Defence Headquarters, was established and charged with coordinating the air defences of Sumatra. In January 1944 though, it was renamed the Palembang Defence Unit (PDU). Effectively it was a devolved command of the Japanese 25th Army, whose headquarters was in the Sumatran hill town of Bukittinggi, in west central Sumatra. This in turn handed over operational responsibility for air defences to the Japanese Army Air Force. The PDU consisted of three air defence regiments of the Japanese Army, as well as a machine-gun battalion. The 101st, 102nd and 103rd Air Defence Regiments and the 101st Machine Cannon Battalion were positioned around Palembang, and its nearby airfields. Although exact weapon numbers are difficult to determine, each regiment was composed of three battalions, each equipped with up to 12 AA heavy guns, grouped into three batteries. For the most part these were Type 88 75mm *Tai-ku Ko-Sha Ho Hei* ('high-angle anti-aircraft guns').

These had first entered service in 1927, and were based on British-designed 3in AA weapons of World War I vintage. These guns had a muzzle velocity of 2,400fps (720mps), giving a shell a maximum vertical ceiling of 30,000ft at the gun's maximum elevation of 85°, and an effective range of around 6 miles. They sat on a central pedestal, atop a five-leg trail, and were capable of firing up to 15 rounds a minute, by a well-trained crew. These were formidable flak weapons, capable of firing a 'box barrage' around a bombing target designed to deter enemy aircraft flying through it. Two more independent battalions were stationed in positions near Medan, one more in north-west Sumatra, and another two at Bukittinggi and Sabang. In addition, in 16th Army's command in Java, another regiment was divided between Batavia and Surabaya.

The Machine Cannon Battalion deployed light automatic anti-aircraft guns. In Sumatra these were often Type 96 25mm guns, designed in the mid-1930s, and again based on a British design. These were usually deployed in twin mounts, in batteries of six to eight mountings. The battalion had four such batteries under its command, and all its guns were deployed around the two oil refinery sites at Palembang. In addition, independent batteries were deployed at Sabang, Port Blair, Nancowry in the Nicobar Islands, Sigli in north-east Sumatra, the two oil production sites north of Medan, Bangka harbour and Dumai, on the island's eastern coast. Independent batteries were also deployed in defence of most Japanese airfields in Sumatra. These batteries, though, came under the command of the Japanese Air Force, and were commanded by the base commander.

Air crews of 854 NAS examine a model of the Pladjoe oil refinery in Palembang aboard *Illustrious* before Operation *Meridian I*. Details of the layout were provided in Ceylon by former employees of the Dutch Shell Company.


Final approach from
8,000ft
Barrage balloon
(6,000ft)
Release point
(3,500ft)
Withdrawal
AA fire
during descent
Light AA fire
Target
Balloon cable
Aim off point
AA battery
Light AA
battery
Pladjoe
Musi River

## THE AIR DEFENCES OF PALEMBANG, SUMATRA, JANUARY 1945

Pladjoe oil refinery, together with the neighbouring Songei Gerong oil refinery, were the largest in Sumatra – in fact the largest in all of the East Indies. Together they accounted for the majority of Japan's supply of both fuel oil and aviation fuel – over 3 million tons of it per year. This made Palembang a place of great strategic importance. Consequently it was extremely well protected. This included four fighter squadrons, based at Talengbetoetoe immediately north of Palembang city, as well as at the nearby airfields at Lembak, Lahat and Martepura. For instance, Talengbetoetoe was home to the 21st *Hiko Sentai*, made up of Ki-45 fighters.

Palembang was the central command and control point for a radar network that covered much of southern Sumatra. The effectiveness of this early warning system, though, was limited by the mountainous spine of the island, and by climactic conditions. Approximately 24 AA battery positions encircled Palembang, the majority mounting heavy 75mm AA guns, capable of putting up a formidable flak barrage. These were supported by an inner ring of light 20mm AA guns, which were concentrated around the two refineries, the banks of the Musi River, and around Talengbetoetoe airfield. In all, a total of 270 AA guns were deployed around Palembang.

In addition, the southern approaches to the refineries were protected by a belt of 30 barrage balloons, which when released could rise to a height of around 6,000ft. These proved an effective deterrent to all but the most courageous dive-bomber crews. Another 10–30 barrage balloons were reportedly housed in Palembang, to provide a similar screen to the north of the city, but in late January these had yet to be deployed. Taken together, Palembang and its two refineries were the most heavily defended place in the East Indies. This, though, failed to deter the British Pacific Fleet from launching major air strikes against these refineries.

These weapons were essentially short-range AA guns, with a maximum effective ceiling of 4,500ft, and an effective range of around 3,500yds. The guns, though, had an impressive rate of fire of up to two rounds per second, although over-heating barrels and limited ammunition supply would limit this. They could be fired using a targeting sight, or controlled by a fire director, so that all mounts could fire on the same angle and bearing. To augment these though, the Japanese 25th Army used a variety of other AA weapons, most of which had been captured from the Dutch. The same was also true of coastal defences, which in this theatre were limited to a few guns protecting Sabang, and sites in the Andaman and Nicobar Islands. These were usually 75mm or 105mm guns, in concrete emplacements, guided by a fire direction post. Their accuracy, at least in practice, was poor. However, during the Allies’ attack on Sabang they inflicted damage on the British destroyers who entered the port.

## Air defences

In 1944–45 the air defence of Sumatra was the responsibility of the 3rd *Kogu gun* ('Air Army') of the Japanese Army Air Force. It was based in Singapore under the command of Lieutenant General Satoshi Kinoshita. He was responsible for the air defence of a large part of South East Asia, from Burma, Thailand and Indochina, to Malaya, Singapore and the Dutch East Indies. His sprawling command was divided into a number of operational areas, each covered by a *Hiko Shidan* ('Air Division'). In the case of Sumatra, this was the 9th *Hiko Shidan*, which was based in Palembang. Again, this reflected the importance of this key oil production site to the Japanese. When the air campaign began, this formation was commanded by Lieutenant General Ryuichi Shimada, but in October 1944 he was succeeded by Lieutenant General Hidenobu Hashimoto. These were the men who would coordinate the air defence of Sumatra in the face of the British carrier strikes.

In early 1944 the anti-aircraft defences of the PDU were brought under Shimada's control, to permit a unity of command. Initially, the Air Division was made up of a *Hikodan* ('Air Brigade') of fighters, which in turn was divided into two smaller formations, the 21st and 22nd *Hiko Sentai* (or 'Air Combat Group'). Officially each of these combat groups was made up of three squadrons. Each *Hikoati* ('Squadron') usually contained three flights of three fighters apiece. However, each combat group usually contained a number of spare aircraft, as well as special attachments of other planes, such as reconnaissance aircraft. Usually, each *Hiko Sentai* then contained around 45 aircraft. In addition, the 9th *Hiko Shidan* contained other independent squadrons, usually of bombers or reconnaissance planes. Shimada was also responsible for all airfields in his command's area, as well as maintenance facilities, and the anti-aircraft defences of the PDU.

The fighters were concentrated around Palembang, but some squadrons were stationed elsewhere across Sumatra, from Sabang island just off its northern coast to Tegineneng, near Sumatra's southern tip. The squadrons tended to be composite formations, made up of two main types of aircraft. The first was the Nakajima Ki-43 Hayabusa fighter, (codenamed 'Oscar' by the Allies), which was essentially a land-based variant of the Mitsubishi A6M 'Zero' used by the Japanese Navy. These were manoeuvrable, but Allied pilots felt that the quality of pilot training by 1944–45 wasn't what it had been earlier in the Pacific War. The second popular type in Sumatra was the Nakajima Ki-44 Shoki fighter, which was primarily a fast interceptor, which lacked the excellent dogfighting skills of the Ki-43. The Allied codename for this fighter was the ‘Tojo’. The Air Division also had a squadron of twin-engined two-seater Kawasaki Ki-45 ‘Nick’ heavy fighters, used primarily in the night fighter or interceptor roles, much like their German counterpart the Bf 110.

Also encountered in Sumatra were a number of bombers, and a reconnaissance aircraft. The twin-engined Mitsubishi Ki-46 III ‘Dinah’ was the main long-range reconnaissance aircraft used by the 9th Air Division, where its speed and high-altitude performance made it ideal as a maritime search aircraft. However, the Royal Navy discovered that this wasn’t often practised over the Indian Ocean. So, the true value of the Ki-46 was somewhat wasted by a landward-looking army air force command. There were bombers available too, in independent squadrons attached to the 9th Division. These were primarily made up of the two-engined Mitsubishi Ki-21 heavy bomber, which the Allies codenamed the ‘Sally’. It was really a medium bomber by Allied standards, and was somewhat obsolete by 1944, being relatively slow, and limited in range and endurance. A number of Mitsubishi Ki-51 dive bombers or light bombers, codenamed ‘Sonia’ were also used, but again these were slow by Allied standards, and so usually kept from front-line use.

Before every operation, air crews would attend detailed briefings, outlining the target, the plan and their mission. This would be followed by a detailed coverage of the weather, enemy opposition, emergency procedures and many other factors. For this succession of air strikes carried out by the Eastern and British Pacific Fleets, much depended on the ability, initiative and nerve of these young men.

# CAMPAIGN OBJECTIVES

## Return to the Pacific

The building up of Britain’s Eastern Fleet was largely a political decision, based on Prime Minister Winston Churchill’s determination to restore Britain’s lost status in the Far East. Its implementation, though, depended on the success of Allied efforts in other theatres. First, the tide had to be turned in the Battle of the Atlantic, so that the supply line between the United States and Canada and the British Isles could be secured. Then, to safeguard the transport of vital war materiel to the Soviet Union, the Royal Navy had to support the Arctic Convoys in the face of heavy German attacks. This also involved both the Royal Navy and the Royal Air Force reducing the offensive power of the Kriegsmarine and Luftwaffe in northern Norway.

Corsair fighters of 1841 NAS ranged for take-off on the after flight deck of HMS *Formidable* during air operations off Norway in August 1944. For take-off, aircraft were clustered at the after end of the flight deck, leaving the rest free for their take-off run. Note the long-range fuel tanks carried beneath each fighter. These were similar to those used by Corsairs from *Illustrious* and *Victorious* during the Palembang raids.

The third limiting factor was the planned invasion of north-west Europe in the summer of 1944. This demanded a great deal in terms of manpower, equipment and logistics, and tied down naval resources which had been earmarked to support the operation. This was linked to a similar situation in the Mediterranean. Since May 1940 the Royal Navy had been fighting a gruelling campaign there, against both the Royal Italian Navy and the German Luftwaffe and Italian Regia Aeronautica, whose aircraft inflicted heavy losses on Britain's Mediterranean Fleet and on the convoys sent to resupply the fortress island of Malta. Nevertheless, the landing of Allied troops on the Italian mainland, in September 1943, eased the pressure on the Mediterranean Fleet, and ultimately allowed some of its more potent ships to be spared for operations in the Far East. It was only in early 1944, when all these other demands had either been largely dealt with or catered for, that more warships could be spared.

This, though, wasn't a straightforward transfer from one theatre to another. In most cases only the most modern warships were sent east, and even these usually had to be refitted first, to make them more suitable for the task ahead. This usually meant the fitting of effective air conditioning systems on board, to render crew accommodation tolerable, and the dramatic increase of light anti-aircraft armament in the warships and fleet train logistics vessels earmarked for the Eastern Fleet. For the most part this meant 40mm Bofors guns when available, and the smaller 20mm Oerlikons. In some cases, though, the cooling systems proved less than effective, particularly in the fleet's smaller ships – a problem that would only be resolved through further refits in Sydney.

Compared to the Grumman Avenger which replaced it, the Fairey Barracuda was a lumbering aircraft, albeit one which could carry a sizeable payload. In the Sumatran campaign its real problem was its relatively limited range, so, in November 1944, Fairey Barracuda squadrons were replaced by Avengers in *Illustrious*, *Indomitable* and *Victorious*.

In terms of aircraft, the fleet aircraft carriers earmarked for service in the Far East were re-equipped with American-designed aircraft, to improve compatibility with the US Navy in any future joint operations. In effect though, the British-built aircraft used by the Fleet Air Arm at this late stage of the war were less suitable. The Fairey Barracuda strike aircraft and the Supermarine Seafire fighter both lacked the range for effective operations in the Pacific, and the former was regarded as clumsy compared to its American counterparts, while the Seafire, a naval variant of the Spitfire, was generally seen as being too fragile for prolonged carrier operations.

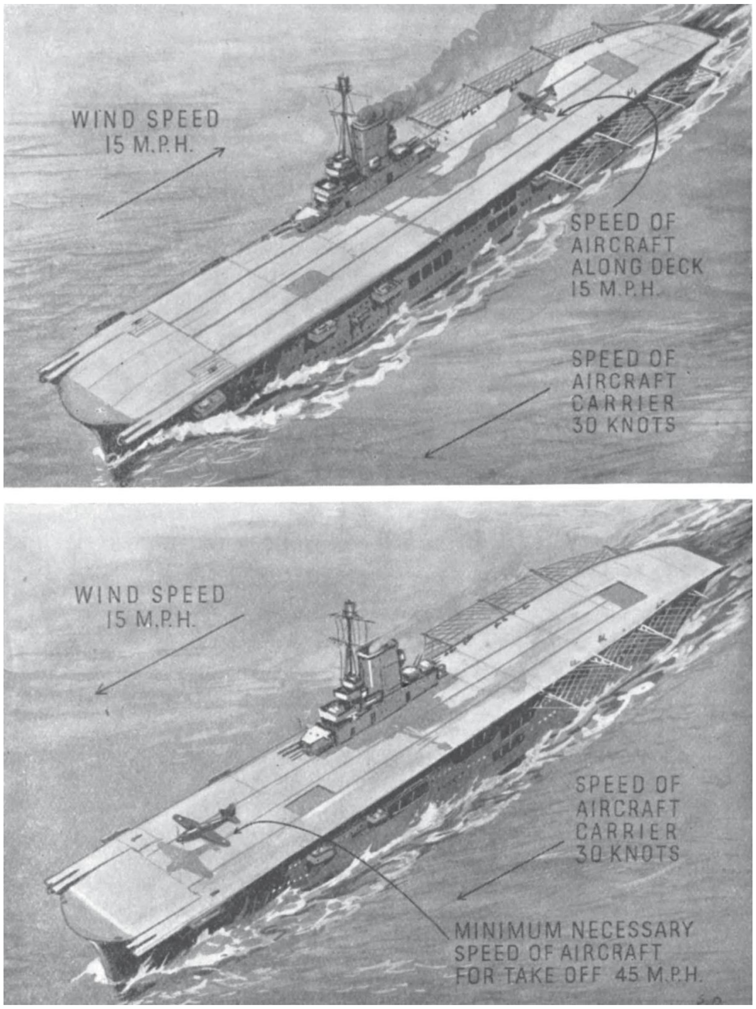
Just as importantly, the Eastern Fleet was expected to operate at a considerable distance from its fleet base in Trincomalee in Ceylon, or its forward base and repair yard in Sydney in Australia. So, a large fleet train of support vessels would be required, capable of repairing, refuelling and supplying the fleet and its aircraft while operating far from home. Fuel oil had to be transported to Ceylon from the Persian Gulf, or to Australia from the United States, which required a further large-scale logistical organization. Fortunately, the Admiralty realized this, and supplied the Eastern Fleet with the fleet train it needed, supported by a motley collection of hired merchant naval vessels used as oilers or supply vessels. It also established flag rank commanders and their staffs in the two fleet bases, to supervise this mammoth operation. Only when all that had been arranged could the Admiralty and the fleet commander, Admiral Somerville, consider exactly what type of operations might be undertaken by Britain’s reconstituted Eastern Fleet.

In fact, by this stage of the war there was even a question whether any major British naval offensive was actually necessary. After its immense expansion, by the summer of 1944 the US Navy and other branches of the US military were more than powerful enough to defeat Japan on their own. Some, especially Admiral Ernest J. King, the Commander-in-Chief of the US Navy, were vocal in their opposition to British participation in the War in the Pacific, King viewed it as primarily an American operation. He argued – with some justification – that the Royal Navy lacked the ability to support itself in Pacific waters, and if it did become involved, it would divert resources from his own fleet. In the end, though, it was the determination of Churchill that tipped the balance. In November 1943 at the Cairo Conference it was agreed that the Eastern Fleet would play its part in the Pacific campaign.

This, then, left Admiral Somerville and his staff the problem of what exactly his fleet could achieve. It was agreed that its core would be its carrier strike force, which was expected to be reinforced as the campaign went on. It was also expected that while some degree of cooperation and liaison with the US Navy could be expected, for the first phase of fleet operations, based in the Indian Ocean, this would primarily be a British and Commonwealth affair. Somerville, however, was an extremely knowledgeable naval commander, and fully recognized the importance of training. The Admiralty did too, so a network of liaison officers was sent to work with the US Navy, and vice versa. This would bear fruit later in the war, when the British Pacific Fleet ventured into the Central Pacific alongside its American allies. For now, though, the benefits were more straightforward.

As commander-in-chief of the Royal Navy's Eastern Fleet, Admiral Sir James Somerville (1882–1949) laid the groundwork for the creation of Britain's own carrier strike force. It was the highly able Somerville who set in motion the Sumatra air campaign in the spring of 1944.

As early as February 1944, a British delegation, led by a rear admiral, was sent to the Pacific to study American fast-carrier operations at first hand. Not only did this lay the groundwork for the future integration of naval air operations, such as those conducted during the Okinawa campaign, but it gave the British a chance to see exactly how the US Navy managed to launch large multi-carrier air strikes, or create a fleet air defence. Until now, the Royal Navy had had little practice in massed carrier operations – it simply lacked the carrier power to conduct them. Now though, by combining British practices with American methods, the Eastern Fleet was finally able to carry out operations on a hitherto unimagined scale.


WIND SPEED
15 M.P.H.
SPEED OF
AIRCRAFT
ALONG DECK
15 M.P.H.
SPEED OF
AIRCRAFT
CARRIER
30 KNOTS
WIND SPEED
15 M.P.H.
SPEED OF
AIRCRAFT
CARRIER
30 KNOTS
MINIMUM NECESSARY
SPEED OF AIRCRAFT
FOR TAKE OFF 45 M.P.H.

The basics of aircraft carrier operations are illustrated in this wartime training manual. To reduce the speed the aircraft needed during take-off, the carrier would steam into the wind at full speed, meaning it could become airborne more easily.

It was decided that the most practical target for a fleet air offensive was the Japanese-held islands of Sumatra and Java in the Dutch East Indies. The oil fields and refineries there accounted for over 80% of Japanese oil production. The remainder came, for the most part, from the north of China, which was also under Japanese occupation, although there were other smaller producion areas. This then, was a target of supreme strategic importance. If the Eastern Fleet could knock out these oil fields and refineries, then the Japanese would be starved of fuel. This would dramatically impact the effectiveness of the Japanese navy and air force, effectively starving them of the fuel they needed to fight. The British war cabinet approved the objective, as did the Admiralty. Even Admiral King and the US government supported the operation, and promised to offer whatever logistical support it could to ensure its success.

Admiral Somerville decided to begin in a relatively small-scale way, by way of a training exercise. This would also provide an opportunity to work closely with elements of the US Navy, in the first Anglo-American naval air operations of the Pacific War. The intention was to start these air operations in the north-eastern corner of the Indian Ocean, against the island of Sabang, to the north of Sumatra. This had the dual purpose of training his own carrier crews in large air operations, while also destroying Japanese oil facilities and air defences on the island. The commencement of these brief but important joint training air operations was scheduled for April 1944.

Then, in mid-summer, the fleet's carriers would turn their attention to the Japanese-held Andaman Islands and Port Blair, off the coast of Burma. The aim here was to attack Japanese air and naval defences in the area. This would be important later, when the fleet were expected to support amphibious operations along the coast of Burma. This, though, was still seen as a learning curve operation, before taking on the heavier defences further south. Then, for the remainder of the year and into the next, the fleet would conduct further air strikes against targets in the long chain of islands running between Rangoon in Burma and Batavia in Java. These were primarily aimed at oil production centres, but Somerville also saw it as vital to destroy enemy airfields and aircraft too, to reduce the Japanese ability to strike back at his fleet, or to organize effective air protection over Sumatra.

These attacks would involve the fleet coming within a hundred miles or so of the coast, which placed them at risk from land-based air strikes, or attacks by Japanese submarines. The latter threat would be countered by a string of Allied submarines and maritime reconnaissance aircraft, designed to warn the fleet of any submarine threat, and air strikes against any Japanese naval forces who attempted to close with the fleet, either on the surface or underwater. The fleet itself had its own anti-submarine defences, but Somerville, an old Atlantic hand, knew the importance of aircraft in this kind of warfare.

Then, massed air attacks would be carried out at selected targets, including Sabang again, to completely destroy its facilities, as well as the neighbouring Nicobar Islands, which housed Japanese airfields and a small naval base. Then it was the turn of the major refineries and oilfields. These were Penang off the Malay coast, nearby Pangkalan Brandan and Belawan Deli in north-east Sumatra, Surabaya in north-eastern Java, and finally the key oil facilities at Palembang, Pladjoe and Songei Gerong, all clustered close to each other in south-eastern Sumatra. If the facilities weren't damaged sufficiently, then the attacks would be repeated. The aim was to destroy virtually the entire oil production of the region, over the course of several months.

Ironically, it was the success of the US Navy in the great naval battles of the Philippine Sea in June 1944 and Leyte Gulf in late October that led to a renewed questioning of the Eastern Fleet's operation. The sheer scale of the Japanese defeats in these two major battles saw the withdrawal of the remnants of the Japanese fleet to Okinawa, far to the north. This rendered it much harder to supply it with fuel oil produced in the Dutch East Indies, as any Japanese tankers would have to run the gauntlet of Allied land-based aircraft and submarines. However, by this stage the British naval operation was well under way, and so it was deemed important that it should continue. Not only would this ensure that this vital resource wouldn't reach Japanese ships and aircraft, but it also gave the fleet and its air crews valuable experience. This would be crucial if the British planned to join forces with the Americans in the final drive on Japan. So, the Eastern Fleet's air attacks would continue until the job was done.

In all four of the fleet aircraft carriers serving in the Indian Ocean during this period, their main anti-aircraft armament was a battery of radar-guided 16 4.5in quick-firing Mark III guns, in eight twin turrets. Their shells were proximity-fused, allowing the carriers to throw up a flak barrage to deter enemy aircraft.

## Order of Battle

**The British Pacific Fleet, November 1944**
**Commander-in-Chief: Admiral Sir Bruce Fraser**

**1st Carrier Aircraft Squadron** Vice Admiral Sir Philip Vian (4 fleet aircraft carriers)

| | |
|---|---|
| *Indomitable* (flagship) | (Indomitable-class) |
| *Illustrious* | (Illustrious-class) |
| *Victorious* | (Illustrious-class) |
| *Indefatigable* | (Implacable-class) |

**1st Battle Squadron** Vice Admiral Sir Bernard Rawlings (2 battleships)

| | |
|---|---|
| *King George V* (flagship) | (King George V-class) |
| *Howe* (fleet flagship) | (King George V-class) |

**4th Cruiser Squadron** Rear Admiral Patrick 'Daddy' Brind (3 light cruisers, 2 AA cruisers)

| | |
|---|---|
| *Swiftsure* (flagship) | (Swiftsure-class light cruiser) |
| *Gambia* (HMNZS) | (Fiji-class light cruiser) |
| *Black Prince* | (Bellona-class light cruiser) |
| *Argonaut* | (Dido-class anti-aircraft cruiser) |

| | |
|---|---|
| *Euryalus* | (Dido-class anti-aircraft cruiser) |

**4th Destroyer Flotilla** (4 destroyers)
*Quickmatch* (HMAS), *Quiberon* (HMAS), *Quality*, *Queensborough* (Q & R-class destroyers)

**5th Destroyer Flotilla** (6 destroyers)
*Grenville*, *Ulster*, *Undine*, *Ursa*, *Urania*, *Undaunted* (S, T, U, V & W-class destroyers)

**27th Destroyer Flotilla** (6 destroyers)
*Kempenfelt*, *Wessex*, *Wager*, *Whelp*, *Whirlwind*, *Wakeful* (S, T, U, V & W-class destroyers)

**Support Force Escorts** (5 sloops, 3 frigates)
*Crane*, *Pheasant*, *Redpole*, *Whimbrel*, *Woodcock* (modified Black Swan-class sloops)
*Barle*, *Helford*, *Parret* (River-class frigates)

**1st Minesweeping Force all Royal Australian Navy** (8 HMAS minesweepers)
*Ballarat*, *Maryborough*, *Lismore*, *Whyallah*, *Goulburn*, *Kalgoorlie*, *Toowoomba*, *Bendigo* (Bathurst-class minesweepers)

**23rd Minesweeping Force all Royal Australian Navy** (8 HMAS minesweepers)
*Geraldton*, *Cessnock*, *Cairns*, *Ipswich*, *Tamworth*, *Woolongong*, *Pirie*, *Launceston* (Bathurst-class minesweepers)

**Fleet Train**
**Royal Navy manned**
**Escort Aircraft Carriers (4):**

| | |
|---|---|
| *Slinger* | (Ameer-class) – replenishment carrier |
| *Speaker* | (Ameer-class) – replenishment carrier |
| *Striker* | (Attacker-class) – ferry carrier |
| *Fencer* | (Attacker-class) – ferry carrier |

**Repair Ships (3)**

| | |
|---|---|
| *Unicorn* | (Unicorn-class light aircraft carrier) – aircraft repair ship |
| *Resource* | (Resource-class heavy repair ship) |
| *Artifex* | (Artifex-class repair ship – converted merchantman) |

**Destroyer Depot Ship (1):** *Tyne* (Tyne-class)

**Netlayer (1):** *Guardian* (Guardian-class)

**Royal Fleet Auxiliary (RFA) manned**
**Replenishment Oilers (4):**

| | |
|---|---|
| *Arndale*, *Cedardale*, *Dingledale* | (Dale-class) |
| *Brown Ranger* | (Ranger-class tanker) |

**Merchant Navy manned**

**Victualling Store Ships (4):** *City of Dieppe*, *Denbighshire*, *Fort Edmonton*, *Fort Alabama*
**Armament Store Ships (10):** *Cordina*, *Darvel*, *Hermelin*, *Heron*, *Kheti*, *Pancheco*, *Prince de Liege*, *Princess Maria Pia*, *Robert Maersk*, *Thyra S.*
**Naval Store Ships (3):** *Gudrun Maersk*, *Kristina*, *Kola*
**Air Store Ship (1):** *Fort Colville*
**Naval Store Ship (1):** *Bosphorus*
**Distilling Ships (2):** *Bacchus*, *Stagpool*
**Hospital Ships (2):** *Oxfordshire*, *Tjitjalengka*
**Oilers (4):** *Ambrosio*, *San Alfonso*, *Wave King*, *Aase Mersk*

# THE CAMPAIGN

## The Royal Navy finally strikes back

### Operation *Cockpit*

By April 1944 Admiral Somerville only had a single carrier under his command, HMS *Illustrious*. Three more carriers were on their way out to him, but he was reluctant to wait for them before beginning his campaign. As the Japanese Combined Fleet had relocated to Singapore, the US Navy sent him the veteran aircraft carrier USS *Saratoga*. Officially they were there to reinforce the Eastern Fleet, in the event of another Japanese raid into the Indian Ocean. Somerville, though, felt this gave him a unique opportunity to practise inter-fleet carrier operations. Aptly codenamed Operation *Diplomat*, this operation lasted from 21 to 31 March, and together the force practised refuelling at sea and joint air operations. It also gave both sides a chance to get the measure of the other.

Operation *Cockpit* on 19 April 1944 was the first offensive strike of the campaign. It saw the first of two air strikes on the island of Sabang, off the northern coast of Sumatra, which was home to a small Japanese naval base and a trio of airfields. This shows some of the damage inflicted on the port and the nearby airfield.

Then, on 16 April, the fleet sailed from Trincomalee on what would be their first offensive operation of the campaign. Codenamed Operation

*Cockpit*, this was a carrier-launched air strike on the island of Sabang, to the north-east of Sumatra. It had been requested by Admiral King, to divert Japanese attention away from an American landing at Hollandia on the north coast of New Guinea, which was scheduled for 22 April. Somerville had *Illustrious* and *Saratoga* at his disposal, supported by four capital ships, six cruisers and 13 destroyers. Once at sea the fleet divided into two groups. Task Force (TF) 70, led by Admiral Sir Arthur Power in *Renown*, included the two carriers, the heavy cruiser *Cumberland*, and a screen of six destroyers – three British, and three American. The rest of the fleet, designated TF 69, was commanded by Somerville, whose job it was to protect Power's force in case the Japanese fleet sortied from Singapore. As an added precaution the submarine HMS *Tactician* was stationed west off Sabang, to rescue any air crews forced to ditch in the sea.

TF 70 reached its flying-off position 100 miles to the south-west of Sabang at dawn on Friday 19 April. The two carriers began flying off at 0530hrs. In all, the strike consisted of 46 strike aircraft (18 American Dauntlesses and 11 Avengers, and 17 British Barracudas) supported by 37 fighters (24 American Hellcats and 13 British Corsairs). After forming up they set off, flying through clear skies towards their target. The strike was led by the experienced Commander Joseph Clifton of the *Saratoga*.

The objectives of the attack were the island's naval facilities and oil storage tanks, and the airfields at Lha Ngo and Sabang. Saratoga's strike reached the island from the south-west at 0700hrs, while *Illustrious*'s bombers appeared from the west a minute later. The carefully coordinated attack saw the American bombers concentrate on the two airfields and oil storage tanks, while the British targeted the harbour, on the north-east side of the island. A total of 16 of the Hellcats accompanied the American strike force, nine Corsairs protected the British strike, while the remaining eight Hellcats and four Corsairs provided air cover overhead.

The attack came as a complete surprise to the Japanese. The first bombs began falling on the airfield before the Japanese anti-aircraft gunners began firing back. The strike aircraft targeted the airfield facilities and adjacent oil tanks, while the Hellcats swooped in to strafe the Japanese aircraft on the runway and aprons. In all, the pilots claimed to have destroyed 21 Japanese aircraft on the ground at Sabang during the raid, and three more at Lha Ngo. Three of the four oil tanks were set ablaze. The British strike proved less spectacular, although one Japanese merchant ship was sunk in the harbour, and a second one run aground. Although the Japanese naval facilities there were heavily damaged, afterwards the Barracuda crews were criticized for not being more flexible in attacking targets of opportunity during the strike. The Americans seemed more adept at this than their less-experienced British counterparts.

Although the Japanese never managed to scramble any fighter during the raid, one Hellcat was shot down by anti-aircraft fire over Sabang airfield, and it was forced to ditch into the sea a few miles to the west of the port. *Tactician* surfaced to rescue the pilot, while under fire from coastal artillery sited to the north-west of the main port. A Japanese torpedo boat also put to sea, presumably to attack the submarine, but she was strafed and driven off by a flight of Hellfires, led by Clifton. *Tactician* eventually made it safely out to sea, with the downed pilot aboard. The remaining aircraft all made it back to their carriers safely, although 11 of them were damaged during the attack. Once the aircraft were recovered Somerville ordered Power to withdraw to the west, and return to Trincomalee. As they withdrew, three Mitsubishi G4M 'Betty' torpedo bombers attempted to attack Task Group 70, but they were detected, and intercepted by Hellcats flying CAP over the two carriers. All of the Japanese bombers were shot down.

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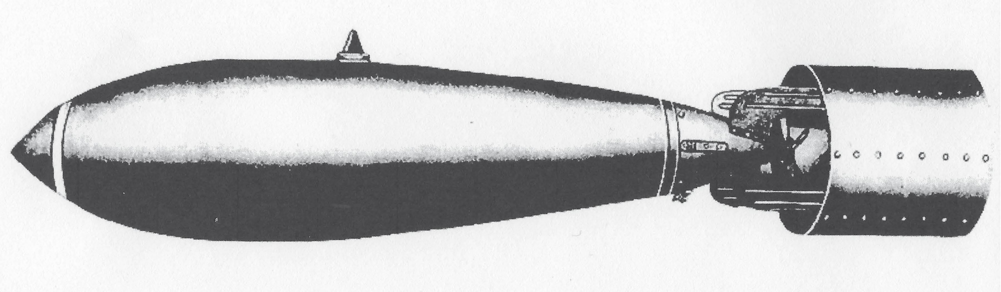
The Grumman F6F Hellcat (or Hellcat F Mark III) was introduced into the Fleet Air Arm in early 1943. By the following summer two squadrons of them (1839 and 1844 NAS) were embarked in HMS *Indomitable*. Their pilots found them extremely manoeuvrable – a superb aircraft in a dogfight.



The principal British weapon in the air campaign waged over Sumatra in 1944–45 was the 500lb General Purpose or MC (medium capacity) bomb. A Grumman Avenger could carry four of these, which were typically released from a height of around 2,500 to 3,500ft. These usually carried an explosive charge of 232lb (105kg) of Torpex. While most exploded on contact, some could be fitted with delay fuzes, which would detonate anything from a few minutes to a day after striking their target.

## The outcome of Operation *Cockpit*

The operation was deemed a success. Damage could have been greater, but all in all the attack damaged the effectiveness of Sabang as an air and naval base. Both air groups had performed well, although the attack highlighted the limitations of the Barracudas, which lacked the speed and manoeuvrability of their American counterparts. Fortunately for *Illustrious*, her Barracudas were replaced by American Avengers early the following month. It highlighted other areas too, where the British realized that the American way of organizing strikes was superior to theirs. So, afterwards, these methods were adopted by the Fleet Air Arm. The only real negative aspect of Operation *Cockpit* was that it had no impact on General MacArthur's Hollandia operation. The Japanese didn't divert aircraft to Sabang and Sumatra to shore up their own air defences, so the Hollandia landings were subjected to heavy air attacks before a secure beachhead and airfield was established there.

| **Operation *Cockpit* The Eastern Fleet (Admiral Somerville)** | |
|---|---|
| Aircraft Carriers (2) | *Illustrious, Saratoga* (USS) |
| Battleships (3) | *Queen Elizabeth* (fleet flagship), *Valiant, Richelieu* (Free French) |
| Battlecruiser (1) | *Renown* |
| Heavy Cruisers (2) | *Cumberland, London* |
| Light Cruisers (3) | *Ceylon, Gambia* (HMNZS), *Tromp* (HNMS) |

| | |
|---|---|
| Destroyers (13) | *Cummings, Dunlap, Fanning* (all USS), *Tjerk Hiddes, Van Gelen* (HNMS), *Quilliam, Quality, Queensborough, Pathfinder, Napier, Norman, Nepal, Quiberon* |
| **Operation *Cockpit*, 19 April 1944: Air forces: 57 strike aircraft, 61 escort (118 aircraft)** | |
| Escorts | 17 Vaught F4U Corsair fighters (15th NFW – *Illustrious*)<br>44 F6F-3 Grumman Hellcat fighters (VF-12/AG 12 – *Saratoga*) |
| Strike Aircraft | 21 Fairey Barracuda TBRs (21 TBRW – *Illustrious*)<br>19 SBD-5 Douglas Dauntless dive bombers (VB-12/AG12 – *Saratoga*)<br>17 TBF-1C Grumman Avenger torpedo bombers (VT-12/12 AG – *Saratoga*) |

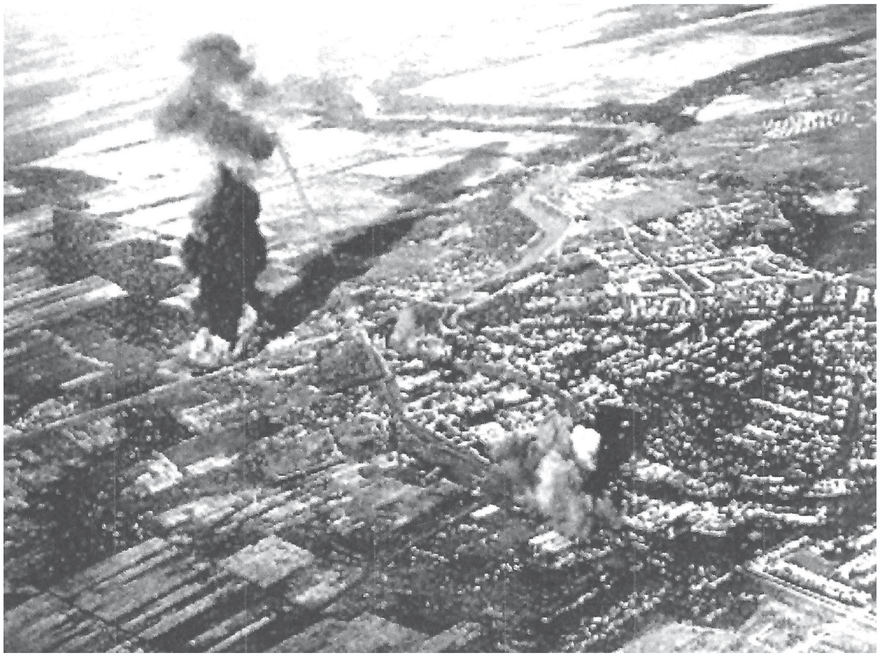
## Operation *Transom*

In the eyes of Admiral Somerville, Operation *Cockpit* was very much a ‘working up’ operation, designed to improve the operational efficiency of *Illustrious* and her air crews. The replacement of the carrier’s Barracudas with much more potent Avengers meant that another similar operation would help this process, while getting the air crews used to the capabilities of their new aircraft. In the end they had less than two weeks to conduct training flights over Ceylon before Somerville launched his next carrier-based strike.

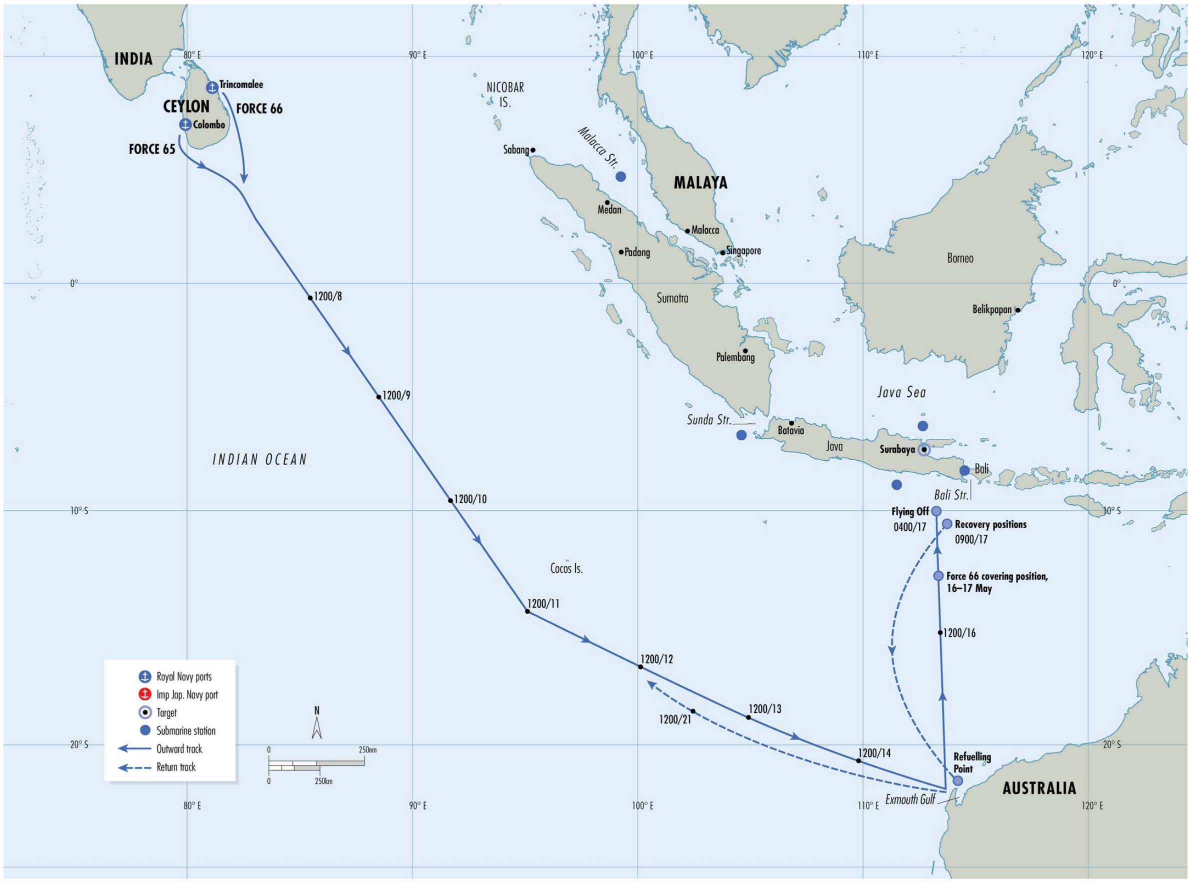
This time the target was Surabaya in Java, where there was a Japanese naval base, airfields and oil production facilities. Codenamed Operation *Transom*, this strike would continue to centre around *Illustrious* and *Saratoga*. Somerville, as well as his carrier strike force commander Rear Admiral Clement Moody, realized that *Saratoga* was about to return to the main American fleet, and wanted to make the most of her presence. Not only was she a potent fighting machine, with double the aircraft capacity of *Illustrious*, but Captain Cassady of *Saratoga* and his officers were still teaching their British counterparts about the markedly more efficient American ways of conducting carrier operations. So, before *Saratoga* was redeployed, Somerville was eager to launch one last joint strike.

For Operation *Transom*, the Eastern Fleet was divided into three task forces. The battleships *Queen Elizabeth*, *Valiant* and *Richelieu* and the battlecruiser *Renown* made up TF 65, supported by a screen made up of the cruisers *Kenya* and *Tromp* and nine destroyers. The carrier strike force was designated TF 66. *Illustrious* and *Saratoga* were screened by the light cruisers *Ceylon* and *Gambia*, and six destroyers – three British and three American. As an extra precaution the submarine *Tally-Ho* was stationed in the Malacca Strait, to warn of any sortie by the Japanese Combined Fleet, while seven US Navy submarines were stationed in the Java Sea and Banda Sea, to screen the Eastern Fleet from any Japanese threat developing from the Dutch East Indies. Two of these were also stationed just to the north of Surabaya, to act as Air-Sea Rescue vessels if required.

Then, as this strike was to be carried out almost 2,000 miles from the fleet's bases in Ceylon, refuelling arrangements had to be made. This, of course, would give the British another chance to practise refuelling at sea (RAS), a skill they needed to perfect if the fleet was to operate in the main Pacific theatre. So, a replenishment force, TF 67, was made up of six Royal Fleet Auxiliary (RFA) tankers and the *Bacchus*, a water distilling ship. They were screened by the heavy cruisers *London* and *Suffolk*. In addition the Australian light cruiser *Adelaide* was stationed in Exmouth Gulf, a sheltered anchorage in the north-west corner of the Australian mainland, which had been established as the rendezvous point for refuelling operations. It though, was almost a thousand miles to the south of the strike target in the north-eastern coast of Java, which, made it Somerville's first destination. Only after refuelling off the Australian coast would the fleet steam north to launch its strike.



Operation *Transom* represented Rear Admiral Moody's last chance to use the USS *Saratoga*, operating alongside HMS *Illustrious*. His target was Surabaya in north-east Java, which was attacked on 17 May 1944. Here, the Wonokromo oil refinery and the Braat Engineering Works can be seen in flames, after a strike by Avengers temporarily embarked on *Illustrious* (832 and 851 NAS). *Saratoga*'s Avengers concentrated on Surabaya harbour.


INDIA
Trincomalee
CEYLON
FORCE 66
Colombo
FORCE 65
NICOBAR IS.
Sabang
Malacca Str.
MALAYA
Medan
Malacca
Padang
Singapore
Sumatra
Borneo
Belikpapan
Palembang
Java Sea
Sunda Str.
Batavia
Java
Surabaya
Bali
Bali Str.
INDIAN OCEAN
1200/8
1200/9
1200/10
1200/11
1200/12
1200/13
1200/14
1200/21
1200/16
Cocos Is.
Flying Off 0400/17
Recovery positions 0900/17
Force 66 covering position, 16–17 May
Refuelling Point
AUSTRALIA
Exmouth Gulf
80° E
90° E
100° E
110° E
120° E
0°
10° S
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Royal Navy ports
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## OPERATION *TRANSOM*: THE STRIKE ON SURABAYA, 17 MAY 1944

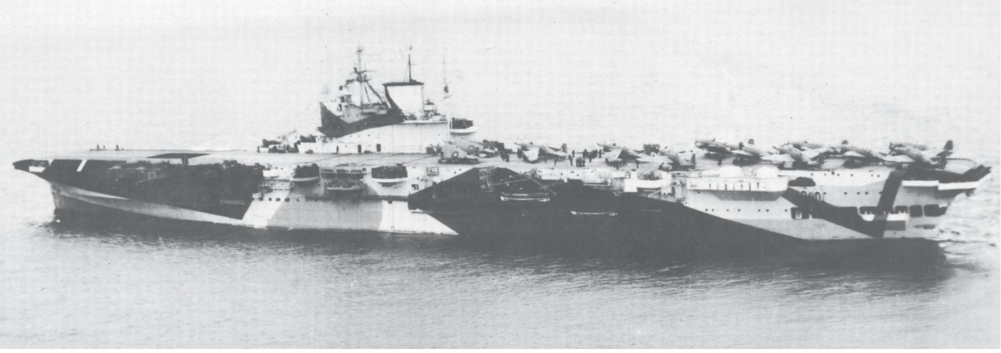
In the spring of 1944 Operation *Diplomat* got under way – an exercise in liaison, cooperation and the transfer of skills between the crew of the veteran American carrier USS *Saratoga* and HMS *Illustrious*. Essentially, the British Eastern Fleet was being schooled in American-style fast carrier operations. Two joint combat operations followed, the second of which was Operation *Transom* – a strike against Surabaya in Java. The large distances involved in the operation gave the British a taste of what was expected of them if they were to cooperate with the US Navy in the Central Pacific.

Task Forces 65 and 66 left Trincomalee and Colombo late on 6 May, and they joined forces the following day. The force commanded by Rear Admiral Moody then set off across the

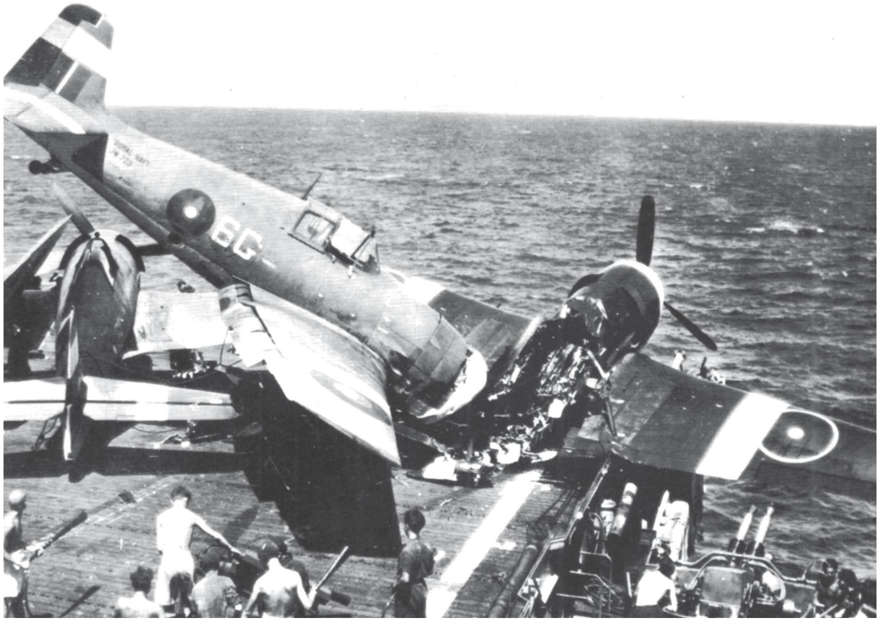
Indian Ocean. The destroyers refuelled at sea on 10 May, and the whole force refuelled again when it reached Exmouth Gulf on the north-western tip of Australia four days later. On 16 May it headed towards the flying-off position south of Surabaya. The air strike was launched early on 17 May, and was a qualified success, with Surabaya's naval base and an oil refinery both damaged. Afterwards, the force refuelled at Exmouth Gulf again before the British component returned to Trincomalee. *Saratoga* and her three escorting destroyers headed south for their long voyage back to the Pacific. After *Transom*, the British Eastern Fleet would build on this new-found experience to conduct a string of other 'club runs' – air strikes against key Japanese targets in Sumatra.

The Eastern Fleet left Trincomalee in the early evening of 6 May. It would take five days to make the 2,700-mile voyage to Exmouth Gulf, which was at the very limit of the fuel endurance of Somerville's destroyers. So, on 10 May, in both of the task forces, the escorting destroyers took turns to refuel from the capital ships – the battleships and battlecruiser of TF 65 and the carriers of TF 66. This was accomplished, despite some technical problems, made worse by the poor weather conditions and lumpy seas. Their route to Exmouth was designed to keep the ships 600 miles from enemy air bases, to reduce the risk of detection. As a result they were never spotted by Japanese search aircraft. During the voyage south the carriers also conducted three training exercises, flying off and forming up into air strikes, in accordance with American methods.

The fleet reached Exmouth Gulf at dawn on 15 May, nine days after leaving port. There the entire fleet refuelled from the waiting tankers of TF 67. The choice of such a sheltered haven made the process relatively simple, and by that evening they were underway again. This time they headed north, towards the enemy coast. For their part, after detaching two of their escorts, TF 68 – the refuelling ships – remained in the anchorage, screened by *Adelaide*. They were ordered to stand by to refuel the fleet again, on completion of the air strike. As the main fleet steamed north on 16 May, the escort screen of TF 66 – the carrier strike force – was reinforced by the cruisers *London* and *Suffolk*, and by the battlecruiser *Renown*. Somerville, remembering the fate of Force X in the South China Sea in December 1941, was taking no chances; strengthening his carrier's air defences was a sensible precaution.



The fleet carrier HMS *Indomitable* was essentially a modified version of the Illustrious class, with greater hangar space, at the cost of slightly reduced armoured protection. She joined the British Pacific Fleet in time to take part in Operations *Lentil* and *Meridian*. At the time her embarked aircraft consisted of Avengers (857 NAS) and Hellcats (1839 and 1844 NAS).



A Hellcat from *Indomitable*, after a crash on deck while landing during operations off Sumatra. In this case the pilot emerged unscathed, but at least one of the fighters ranged for take-off was destroyed. Note the firefighting team in attendance, having extinguished the blaze.

Similarly, while TF 67 closed with the coast, TF 66 – the main body of capital ships and their escorts – took up a holding position some 200 miles to the south of Java. There they could intervene if the Japanese fleet sortied, but were tucked away in the event of a large-scale Japanese air attack. They would serve as a rallying point for the carrier strike group after the mission was completed. During the early hours of Wednesday 17 May, TF 67 approached its flying-off position, approximately 180 miles from Surabaya, and 120 miles from the southern coast of Java. Then, the task force commander, Rear Admiral Moody in *Illustrious*, requested permission from Somerville to begin the operation. The fleet commander signalled his approval, and so at 0430hrs (0630 local time), an hour before dawn, the first aircraft began taking off.

It was a perfect day for flying, clear skies, with just a few scattered clouds and a light wind from the south-east. Once airborne, the aircraft formed up into two groups. Strike A was to target the Wonokromo oil refinery and the adjacent Braat Engineering Works, a few miles to the west of the port. Strike B was to target the port itself, which served as the main base for the Japanese Navy's anti-submarine forces in the Java Sea. That target was another one recommended to Somerville by Admiral King, head of the US Navy. Neutralizing the warships there would go a long way to safeguarding American submarine operations in the area – vital in the campaign to cut Japan's supplies of fuel oil.

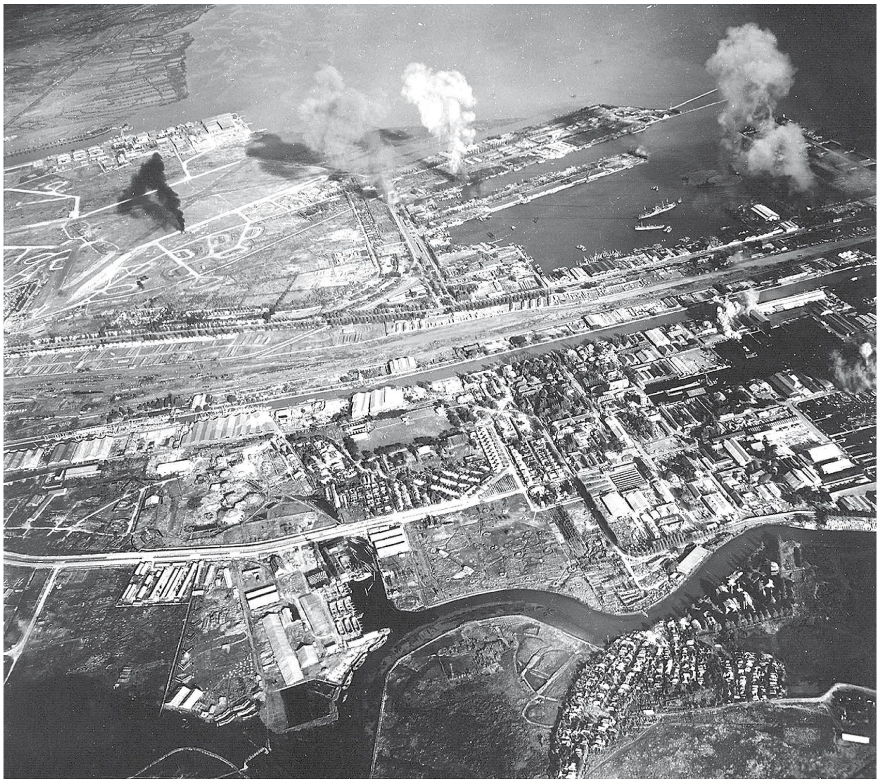
Strike A was made up of nine of the new Avengers from *Illustrious*, and 12 Dauntlesses from *Saratoga*. Their escort was provided by eight British Corsairs. The Avengers would attack the engineering works, leaving the Dauntlesses to pound the oil refinery. Strike B consisted of nine Avengers from *Illustrious*, and six Dauntlesses and 12 Avengers from *Saratoga*. These strike aircraft were escorted by eight British Corsairs and 12 Hellcats. In this operation, the British would attack the base's shore facilities, concentrating on the repair workshops, while the Americans would target any warships in the naval harbour, the floating dock there, a submarine dry dock and any merchant ships – especially tankers – in the main commercial port. Both strikes were coordinated by Commander Joseph C. Clifton from *Saratoga*, who commanded Air Group 12.

| **Operation *Transom*, 17 May 1944 48 strike aircraft, 28 escorts (76 aircraft)** | |
|---|---|
| Strike A (21 strike aircraft, 8 escorts) | Strike B (27 strike aircraft, 20 escorts) |
| Escorts<br>8 Vought F4U Corsairs (15 NFW FAA – *Illustrious*)<br>Strike Aircraft | Escorts<br>8 Vought F4U Corsairs (15 NFW FAA – Illustrious)<br>12 F6F-3 Grumman Hellcat fighters (Air Group 12 VF-12 USN – *Saratoga*) |

| | |
|---|---|
| 9 Grumman Avenger bombers (21 TBRW FAA – Illustrious)<br>12 SBD-5 Douglas Dauntless dive bombers (Air Group 12 VB-12 USN – *Saratoga*) | Strike Aircraft<br>9 Grumman Avenger bombers (21 TBRW FAA – Illustrious)<br>12 TBF-1C Grumman Avenger bombers (Air Group 12 VT-12 USN – Saratoga)<br>6 SBD-5 Douglas Dauntless dive bombers (VB-12 USN – *Saratoga*) |

Once again the Japanese were taken almost completely by surprise. The attack was timed to commence an hour after dawn, at 0630hrs (or 0830 local time). Strike A attacked first, approaching its target from the south on schedule, and anti-aircraft fire was minimal. The British Avengers dropped 28 500lb GP (General Purpose) bombs over their target, causing extensive damage to the engineering works. Two of the Avengers, though, due to pilot error, crashed on take-off, ditching into the sea close to *Illustrious* . All the air crews, though, were rescued. The American element of the strike dive-bombed the oil refinery, and were rewarded with the sight of heavy fires raging as the aircraft flew off over the Java Sea, before circling around and heading back to the carriers.

Strike B also went well, having looped around to the east, over the Java Sea, to approach the port from the north. Again, air defences were light, although these intensified as the Japanese began to react, and an Avenger from *Saratoga* was shot down over the harbour. The crew survived though, but were captured. The American airmen claimed to have sunk several warships and merchant ships in the harbour, and the port facilities were blazing fiercely after the British Avengers dropped their bombs. As the strike aircraft flew off, the Hellcats swooped in to strafe the Japanese airfield at Juanda, to the south of Surabaya, and claimed to have destroyed a dozen aircraft on the ground.



During Operation *Transom*, on 17 May 1944, aircraft from HMS *Illustrious* and USS *Saratoga* attacked the port of Surabaya in north-east Java. *Transom* was the second of two joint operations conducted by the two carriers. The aim was that the US Navy could teach its allies about fast carrier operations – a skill which would be needed if the two navies were to operate together in the Central Pacific.

Apart from that one Avenger from *Saratoga*, the remaining aircraft of both strikes returned safely, and landed without incident. All aircraft were recovered by 0850hrs, and Rear Admiral Moody ordered TF 67 to turn away to the south, and rendezvous with Somerville's main force. The combined fleet then withdrew to the south-west. Meanwhile, in accordance with American procedures, a photo reconnaissance mission from *Saratoga* was conducted, using specially converted Hellcats. Copies of these photos were delivered to Somerville's flagship *Queen Elizabeth* that afternoon. They revealed that despite the claims of the airmen, the strikes hadn't been as destructive as had been thought. It revealed that the damage to the oil refinery was fairly superficial, and instead of multiple ship losses, only one small warship appeared to have been sunk.

Worse, though, was that the photographs revealed that numerous anti-submarine escorts and submarines remained undamaged in the naval base. It looked like a second strike might be needed to complete the mission's objective – the neutralizing of Japanese naval strength in the area. However, no follow-up strike had been planned, despite the advice of *Saratoga*'s Captain Cassady that this was standard procedure in the US Navy, so a disappointed Somerville ordered the Eastern Fleet to return to base. Nevertheless, his staff had learned a valuable lesson – one that would benefit them when the main air campaign began. It also highlighted the importance of the carriers sharing their debriefing reports with the fleet commander as soon as possible after the operation. If that had been done, and a second strike had already been planned, then Somerville would have been able to finish the task.

Afterwards, the Eastern Fleet returned to Exmouth Gulf, where it was refuelled. Then, at 0600hrs on 19 May, Somerville ordered the two task forces to return to Trincomalee. After detaching *Adelaide*, which would return to Freetown, the tankers of TF 68 would follow at their own speed. Somerville's refuelling of his fleet before the long voyage home was part of his plan. He thought it a possibility that the Surabaya raid might result in a sortie into the Indian Ocean by the main Japanese fleet. If that happened, he wanted to make sure his fleet had the fuel it needed to intercept the Japanese as they headed west into the Indian Ocean. In the event, this sortie never happened, and the Eastern Fleet reached Trincomalee without incident in the afternoon of 27 May, although by then many of the ships were extremely low in fuel.

To cover Somerville's withdrawal, the US Air Force staged a small bomber raid on Surabaya. On the evening of 17 May, seven B-24 Liberators of the 380th Bombardment Group took off from Darwin in Australia's Northern Territory, and, after refuelling at Corunna Downs near Dampier in Western Australia, they headed north to Surabaya. They bombed the still-burning naval base shortly after midnight, and returned safely to Darwin.

Meanwhile, after refuelling in Exmouth Gulf, Captain Cassady took his leave of the Eastern Fleet on the evening of 18 May. The British ships formed into a line, and *Saratoga* and her escorts sailed along it, being cheered by the British crews as they passed. Then, *Saratoga* and her three escorting destroyers headed south down the western coast of Australia to the naval base at Fremantle, near Perth. During this voyage south they were accompanied by the Australian cruiser *Adelaide* and the destroyer HMAS *Quiberon*. From there *Saratoga* would continue on to Sydney, before heading across the Pacific to the US Naval base at Bremerton, Washington state, which she reached on 10 June. The veteran carrier would then undergo a refit. She would then spend the rest of the year in a training role, before rejoining the fleet as a specialist night fighter carrier in early 1945.

## Operation *Pedal*

The experience of 'working up' accompanied by *Saratoga* had proved extremely useful. Since their entry into the war the US Navy had become extremely proficient in fast-carrier operations. Now, if the Eastern Fleet was to work alongside their American allies, they had to match these same exacting standards of efficiency. In *Illustrious*, Captain Robert Cunliffe and his crew had worked hard to match *Saratoga*'s degree of professionalism, and had adopted several American methods of carrier operation. Somerville was well aware of this need to adapt, therefore he and Rear Admiral Moody decided to continue these 'working up' operations, even though the fleet was now reduced to a single fleet carrier. Two more carriers, *Victorious* and *Indomitable*, were on their way to join the fleet, and so Somerville wanted *Illustrious* to adopt and perfect these new methods, so they could be passed on to the newcomers. To this end, Somerville ordered plans to be drawn up for a limited operation against Port Blair in the Andaman Islands.

Meanwhile, the escort carrier *Atheling* had arrived in Trincomalee, and so she and *Illustrious* began conducting exercises together. The idea was to practise multi-carrier operations, and despite the limited size of *Atheling*, Moody planned to use her as a 'spare deck' – a flight deck which could be used in the event *Illustrious* was put out of action while her aircraft were still airborne. They also took part in Operation *Councillor*, a diversion to coincide with the American landing on Saipan in the Central Pacific. This consisted of air patrols and increased radio traffic, suggesting an impending British attack on Sabang. The Japanese, though, didn't react, and the bulk of their fleet remained in Singapore.

Then, on 19 June, *Illustrious* put to sea again, this time, though, she steamed towards the Andaman Islands. Operation *Pedal* was designed to achieve three things. First, it was meant to continue the diversionary efforts, to coincide with the Saipan operation. Second, it would also reduce the effectiveness of Japanese air and naval defences in the area, in advance of planned future Allied amphibious operations along the coast of Burma. Third, and the primary purpose for Somerville and Moody, was that it would further develop the combat experience of this nascent British carrier force. The only limiting factor was that the new Avengers had to remain in Ceylon, as they required modifications, so their place was taken by the carrier's old Barracudas, which had been retained in a naval airfield in Ceylon.

The Illustrious-class fleet carrier HMS *Victorious*, pictured soon after she entered service with the Home Fleet in 1941. *Victorious* subsequently participated in operations in the Atlantic and Mediterranean, before being sent to join the Eastern Fleet in the summer of 1944. By that time, she embarked Avengers (849 NAS) and Corsairs (1834 and 1836 NAS).

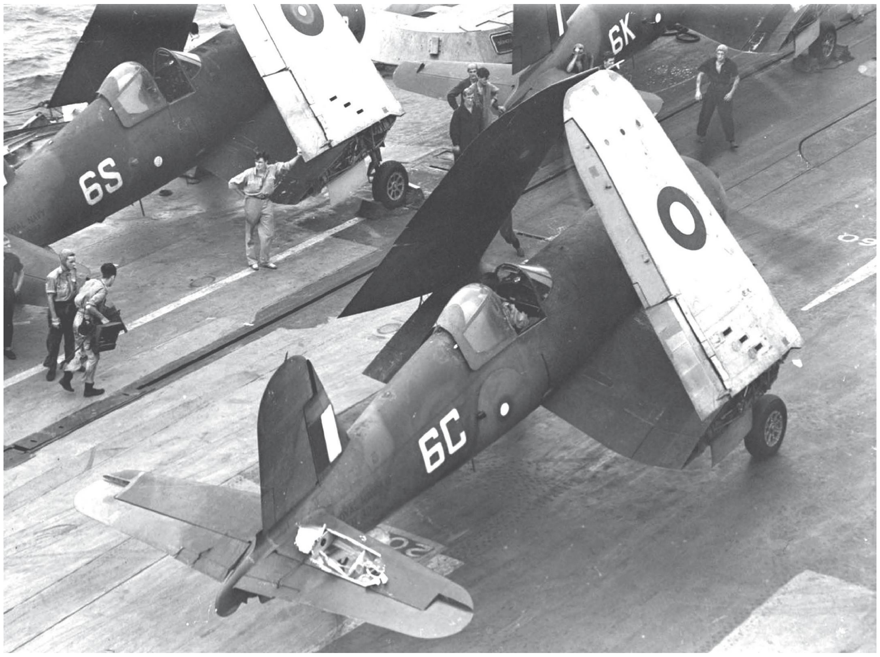
In the end, the whole diversionary part of the plan was completely overshadowed by events in the Central Pacific. As the British force steamed across the Indian Ocean, the American and Japanese fleets clashed in what was one of the largest naval actions of the war – the Battle of the Philippine Sea (19–21 June). Essentially, the Japanese had more to worry about than a pinprick raid by a tiny British carrier force. Still, Operation *Pedal* went ahead as planned. *Illustrious* formed the heart of TG 60, which also included a powerful screen of *Renown*, *Richelieu*, three light cruisers and eight destroyers. In addition, two submarines were stationed off Port Blair, in an Air-Sea Rescue role. At dawn on Wednesday 21 June, TG 60 reached the launch position, just under 100 miles due west of Port Blair.

Sub Lieutenant John Baker RNVR of 1830 NAS examining a hole in the tail of his Corsair from anti-aircraft fire, after returning to *Illustrious* on 21 June 1944. His fighter was damaged while strafing ground targets at Port Blair in the Nicobar Islands, during Operation *Pedal*.

The first aircraft took off at 0600hrs, and began forming up. The weather, though, was less than ideal, with low cloud and rain. This was a very limited strike, involving 15 Barracudas of the 21 Torpedo Bomber Reconnaissance Wing, from two FAA squadrons (810 and 847 Naval Air Squadrons – NAS). Their escort was made up of 16 Corsairs from 15 Naval Fighter Wing. However, two of the Barracudas had to return to the carrier with engine trouble, which reduced the strike force to 13 aircraft, armed with two 500lb and two 250lb GP bombs apiece. The principal targets at Port Blair were the regional Japanese naval headquarters and adjacent seaplane base, and two airfields. No enemy fighters were encountered during the approach to the target from the west, but once they crossed the coast of South Andaman Island the Japanese anti-aircraft guns opened up.

This wasn't going to be the unopposed 'working up' operation many had expected. The fire was unexpectedly heavy, and one Barracuda was damaged over Port Blair, and her three-man crew were captured. Four more aircraft were damaged, but returned safely to *Illustrious*, while a Corsair was hit and forced to ditch in the sea. Her pilot, though, was rescued. During the attack the Barracudas bombed the naval headquarters on Ross Island, and the seaplane base in Phoenix Bay, and inflicted a fair degree of damage. Once over the target, eight of the Corsairs peeled off to strafe the two airfields, while the remainder continued to provide air cover for the bombers. The main airfield (now the Veer Savarkar International Airport) was particularly well defended by anti-aircraft guns, and probably accounted for the Barracuda piloted by Lieutenant Basil Aldwell. It ditched in the sea, and Aldwell and his two companions were picked up by the Japanese. They became prisoners of war and, despite some horrendous treatment, they survived and were liberated at war’s end.

Although this shows Barracudas returning to their carrier off Norway in 1944, the principles of a returning strike landing-on were the same. The aircraft would fly in a holding pattern close to the carrier, which would be steaming into the wind. The aircraft would then be called in to land one at a time, their approach guided from the carrier.



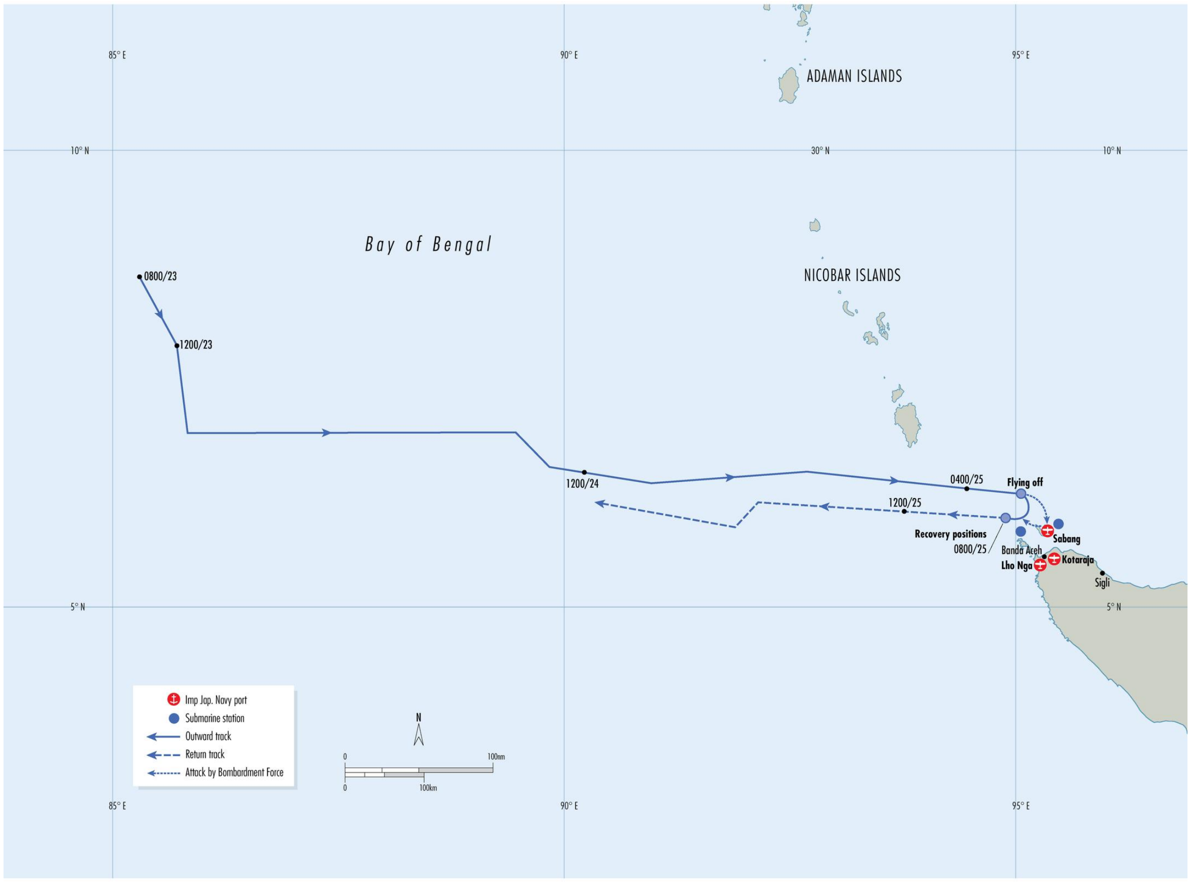
The Corsair piloted by Sub Lieutenant John Baker RNVR, having landed safely back aboard the carrier HMS *Illustrious* on 21 June 1944. Baker's fighter was damaged by anti-aircraft fire over Port Blair in the Andaman Islands during Operation *Pedal*.

The returning aircraft were recovered by 0845hrs, despite a couple of problems with bombers having ordnance that had failed to release. Once they were safely on deck, Moody ordered TF 60 to head west at high speed, under cover of a strong CAP screen provided by the carrier's Corsairs. The expected Japanese counter-strike, though, never materialized, and the force returned to Trincomalee without incident. In terms of damage caused, Operation *Pedal* was not particularly successful. However, it helped develop the experience of the carrier's crew to their new style of carrier operations. Just as importantly, the carrier had launched more aircraft in the strike than it ever had before – 39 of the 57 aircraft embarked had been launched in the strike, or in the eight-fighter CAP mission that protected the carrier during the operation. This displayed an increasingly skilful degree of aircraft handling and flight-deck coordination, which boded well for future operations.

## Operation *Crimson*

On 5 July, fleet carriers *Victorious* and *Indomitable* arrived in Colombo. Now, with three carriers at their disposal, Somerville and Moody finally had the means to step up the scale of their air campaign. They also had three small escort carriers, *Atheling*, *Begum* and *Shah*, and while these were really earmarked for anti-submarine patrols and convoy defence, they could be used for fleet operations if they were needed. It would take time, though, to train these newcomers in the Eastern Fleet's new style of air operations. However, Somerville was keen to retain the initiative in the campaign, while at the same time 'blooding' the newcomers, in a continuation of what was still viewed as a 'working up' period for the fleet. So, plans were drawn up for the next 'working up operation' – a return to Sabang.

On 22 July *Illustrious* and *Victorious* sailed from Trincomalee, accompanied by a powerful surface force of three battleships (*Queen Elizabeth*, *Valiant* and *Richelieu*), one battlecruiser (*Renown*), seven cruisers, including the Dutch *Tromp*, and ten destroyers. This venture, codenamed Operation *Crimson*, was primarily a naval bombardment of Sabang, with the carriers taking a supporting role, providing air cover for the fleet. That said, Somerville requested supporting fighter strafing runs over the island's airfields, to reduce the risk of a Japanese counter-strike. At dawn on Tuesday 25 July the bombardment began, with the Allied 15in guns targeting Sabang harbour and other military targets nearby. Spotter aircraft launched from *Illustrious* assisted in directing the fire, which helped ensure the devastating effectiveness of the bombardment. Three cruisers (*Cumberland*, *Kent* and *Nigeria*) also joined in the bombardment with their 6in and 8in guns, targeting shore batteries.


85° E
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ADAMAN ISLANDS
10° N
30° N
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Bay of Bengal
0800/23
1200/23
NICOBAR ISLANDS
1200/24
0400/25
Flying off
1200/25
Recovery positions
0800/25
Sabang
Banda Aceh
Kotaraja
Lho Nga
Sigli
5° N
5° N
Imp Jap. Navy port
Submarine station
Outward track
Return track
Attack by Bombardment Force
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# OPERATION *CRIMSON*: THE STRIKE ON SABANG, 25 JULY 1944

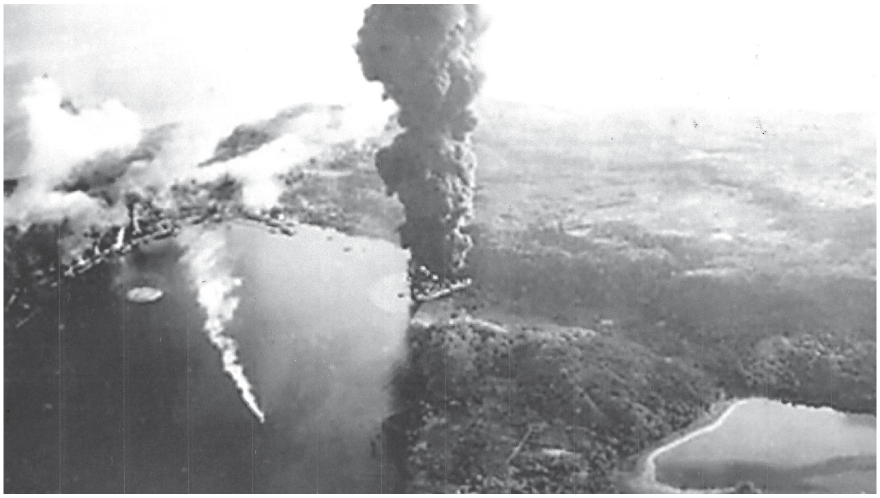
In early July HMS *Victorious* joined the Eastern Fleet, and after a period of training in fast carrier operations by the crew of HMS *Illustrious*, she was ready to take part in offensive operations. Operation *Crimson* was still very much a ‘working up’ strike, to allow the carriers and their embarked squadrons to put their new-found skills into practice. Although the main element of this operation was a shore bombardment of Sabang by surface warships, the carriers would provide CAP over the task force, and would carry out their own strikes against Japanese airfields.

These air strikes were launched at dawn on 26 July, from a flying-off position 35 miles north of the island. The actual operation, though, was hampered by a general lack of practical experience in conducting large-scale carrier strikes. As a result, while the strikes on the Japanese airfield on Sabang, and two more on the Sumatran mainland at Lho Nga and Kotaraja were moderately successful, some squadrons couldn't locate their targets in the dark, and the strafing runs were poorly coordinated. Still, only one Corsair was lost, but the pilot was rescued. The aircraft were recovered from 0800hrs on, and by 0930hrs the fleet was on its way back to Trincomalee. The main aim, though, had been achieved – the gaining of experience, and the highlighting of organizational problems. As a result the next 'club run' strike would be much better organized and executed.

In the final stages of the shore bombardment operation, HNLMS *Tromp* and three destroyers (*Quality*, *Quilliam* and *Quickmatch*) entered the harbour, to engage any ships there using guns and torpedoes. Despite the return fire, which caused some light damage, there was only one fatality – a film cameraman aboard the destroyer *Quality*. The harbour attack was led by *Quality*'s Captain Richard Onslow, commander of the 4th Destroyer Flotilla. By the end of the morning the harbour had been put out of action, its installations wrecked, and most of the vessels there destroyed or badly damaged.

The Fleet Air Arm, though, were not to be left out. The carrier strike force was stationed 35 miles to the north of the island, just a few minutes' flying time from its targets. Accompanying them was a destroyer screen, and the AA cruiser *Phoebe*. At 0520hrs the spotter planes from *Illustrious* took off. Five minutes later they were followed by the main air strike, made up of Corsairs from 15 Naval Fighter (NF) Wing, flying from *Illustrious*, and 47 NF Wing from *Victorious*. The 47 NF Wing strike was made up of 39 aircraft, which split into three squadron-sized groups, to attack the airfields of Kotaraja and Lho Nga, and Sabang town itself. It was still dark though, as sunrise was not until 0633hrs. This made target identification difficult. On the airfields, the Japanese had learned their lesson from the April air strike, and no aircraft were ranged on the runway. Instead they were housed in earthen revetments, which protected most of the Japanese aircraft from the strafing runs.

The anti-aircraft defences of the island had also improved since the spring attack. When the 12 Corsairs of 1838 Naval Air Squadron (NAS) came in to strafe Lho Gha they came under intense anti-aircraft fire, and one fighter was shot down. The pilot, though, managed to ditch in the sea, and was rescued by the British submarine *Tantalus*, one of two positioned off the island as rescue vessels. There were no losses in the other two strafing strikes though, and the remaining aircraft returned safely to their carriers shortly after dawn. The carriers then withdrew to the west, and shortly after 1000hrs they were joined by the remainder of the fleet. As the fleet withdrew, Japanese reconnaissance aircraft appeared and tried to shadow the fleet, but two of them were shot down by the carrier's CAP fighters.



This photograph was taken during Operation *Crimson*, the attack on Sabang on 25 July 1945. While Barracudas from HMS *Illustrious* pounded the port, Corsairs from *Illustrious* and HMS *Victorious* on a 'Ramrod' (a short-range bombing and strafing) mission concentrated on Sabang, Lho Nga and Kotaraja airfields. This shows the aftermath of the attack on Sabang harbour.

Then, at 1513hrs, a squadron-sized group of ten A6M Zero fighters approached from the east, but their approach was detected on radar and they were met by 13 British Corsairs. In the dogfight that followed two Japanese fighters were shot town, and two more were damaged. The remaining Japanese fighters withdrew, leaving the Eastern Fleet to return to Trincomalee in peace.

A week later the carriers were at sea again, providing Air-Sea Rescue cover for bombing attacks on Sumatra by the US Army Air Force. Codenamed Operation *Boomerang*, this involved strikes on Palembang by 54 B-29 Superfortress bombers of the USAAF XX Bomber Command, flying from the China Bay airfield in northern Ceylon. A substantial number of the bombers had to return due to technical problems, but 39 made it to the target, which was heavily damaged in the raid, and the harbour mined. No bombers were shot down over the target but one ran out of fuel on her return to China Bay and had to ditch. All but one of her crew, though, were rescued by the Royal Navy.

## Operation *Banquet*

The Sabang raid had been a great success, but Operation *Crimson* would be the last of the series of strikes carried out under the watchful eye of Admiral Somerville. On 3 August Admiral Sir Bruce Fraser arrived in Colombo, aboard the battleship *Howe*. Just over two weeks later, on 24 August, after a thorough handover, Somerville hauled down his flag as Commander-in-Chief, Eastern Fleet, and Admiral Fraser assumed command. Somerville would still play an important part in what was to come though. His next job was to head the British naval delegation to the United States, where he would work closely with Admiral King. The two got on well, and so Somerville was able to pave the way for greater Anglo-American naval cooperation in the Pacific.

As Commander-in-Chief of the Home Fleet, Admiral Fraser had masterminded the hunting and sinking of the German battleship *Scharnhorst* at the Battle of North Cape, and had provided himself to be a thorough, cerebral and gifted commander. He would prove a worthy successor to the equally talented Somerville. His first task was to split the Eastern Fleet into two parts. The most powerful elements were earmarked for a new formation, the British Pacific Fleet (BPF), which was destined to continue on into the Central Pacific. The remainder of the Eastern Fleet would remain in Trincomalee and Colombo, and would become the East Indies Fleet. Their less-glamorous job was to maintain sea communications across the Indian Ocean, and to support Allied operations in the East Indies and off the coast of Burma.

Meanwhile, the next ‘working up’ operation was getting under way. *Illustrious* was due to depart for Durban for a much-needed refit, and her embarked aircraft had already been flown off. That left Moody with two carriers. However, Operation *Banquet* was a relatively small strike, and so his flagship *Indomitable* and the carrier *Victorious* would be more than sufficient. Planning for the operation was already ongoing when Admiral Fraser arrived. So, the operation, planned jointly by Somerville and Moody, would continue without the new fleet commander’s involvement. The newly arrived battleship *Howe*, though, earmarked as Fraser’s flagship, would take part in the operation, accompanied by two cruisers and five destroyers. There would be no naval bombardment element to this operation, so a larger surface force wasn’t deemed necessary. In any case, only *Howe* was available, as the battleship *Valiant* had recently been sent to Durban for repairs. In addition the submarine *Severn* was stationed off Padang, as the operation’s Air-Sea Rescue (ASR) vessel. The whole force, designated Task Force 64, would be under the command of Rear Admiral Moody.

Admiral Sir Bruce Fraser (1888–1981) took command of the Eastern Fleet in August 1944, a few months before its main components were redesignated the British Pacific Fleet. So, Admiral Somerville established the carrier strike force as the fleet’s main component, but it was Fraser who was responsible for unleashing the fully-fledged air campaign that followed.

This ‘working up’ sortie, codenamed Operation *Banquet*, involved two elements. The first was a photo reconnaissance of potential targets on the west side of Sumatra. This was to be combined with air strikes to give the air crews of *Victorious* and *Indomitable* more experience of multi-carrier operations. So far the air crews of *Indomitable* had had no experience of Indian Ocean operations, so this would serve to 'blood' them. Their targets would be the small ports of Padang and Emmerhaven, on Sumatra's Indian Ocean coast, and the nearby concrete works at Indaroeng. For this operation, *Indomitable* sailed with 14 Hellcats of 5 NF Wing (1836 & 1839 NAS) embarked, together with 14 Barracudas of 12 TBR Wing (815 & 817 NAS). *Victorious* carried 29 Corsairs from 47 NF Wing (1834 & 1836 NAS) and 21 Barracudas of 57 TBR Wing (827 & 829 NAS).

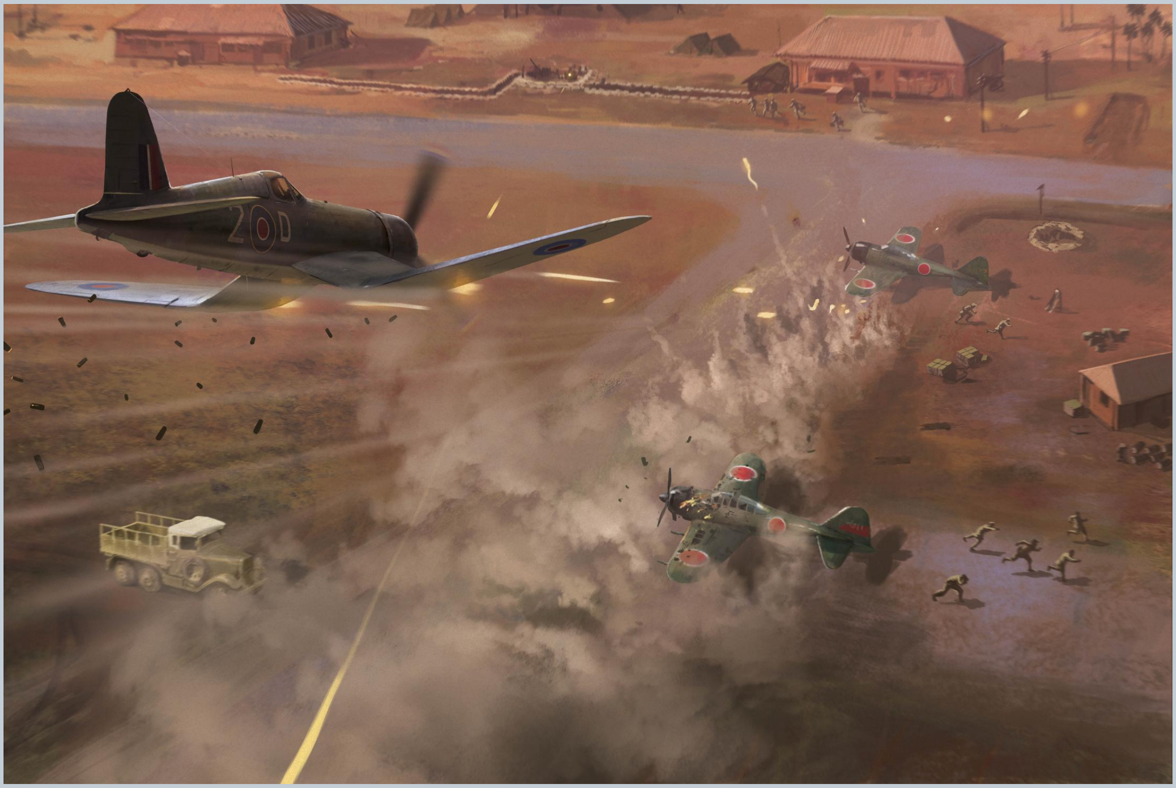
Task Force 64 sailed from Trincomalee on 19 August, and after three days the force's cruisers and destroyers were refuelled at sea by the RFA tanker *Easedale*. The air operations were scheduled to begin at dawn on 23 August, but *Severn*, the ASR submarine, had developed a defect, and so everything was postponed for 24 hours until her replacement *Sea Rover* could reach the ASR position off Padang. However, shortly before dawn on Thursday 24 August, TF 64 reached its flying-off position 15 miles to the south-west of Sibarut Island, off Sumatra's western coast.

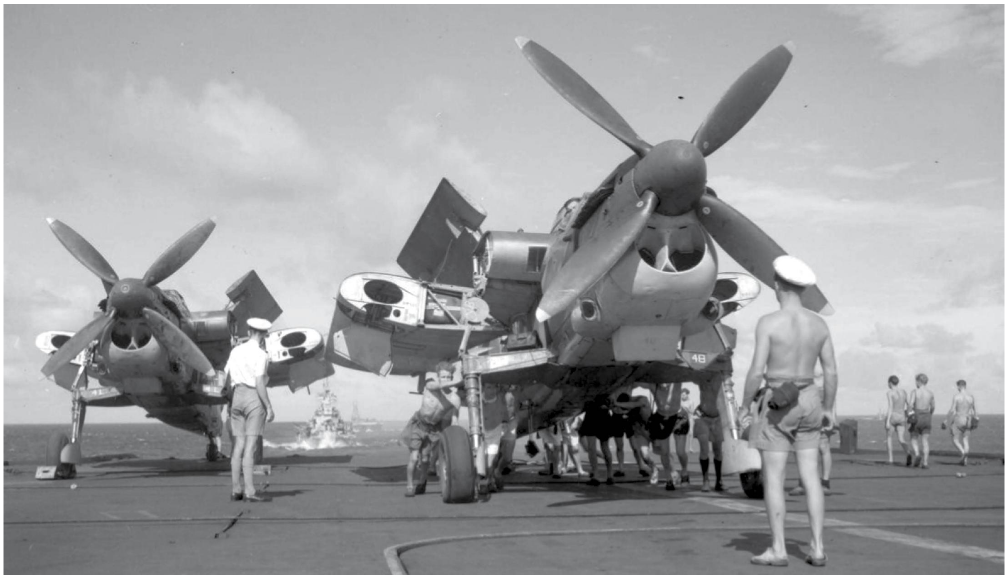
## Operation *Crimson*: the strike on Sabang, 25 July 1944

Operation *Crimson* on 25 July 1944 was primarily a shore bombardment by the Eastern Fleet, but it involved an air element too, provided by aircraft from HMS *Illustrious* and HMS *Victorious*. The launching-off point for the carrier task force was 30 miles to the north of the island of Sabang (or We), off Sumatra's northern tip. The air strikes targeted the island's three airfields, while other aircraft acted as observers for the bombardment force, which would pound the island's harbour, that the Japanese used as a small naval base. Yet more were sent up to photograph the damage.

*Victorious* had three squadrons of Corsairs embarked (1834, 1836 and 1838 NAS), which would be used for a 'Ramrod' – the strafing of airfields at Sabang, and at Lho Nga and Kotaraja (now Banda Aceh) on the nearby Sumatran mainland. Each squadron was allocated an airfield to attack. However, the 39 Corsairs were launched before dawn, and it was still dark when they reached their targets. 1838 NAS couldn't locate Kotaraja, but the attacks on the first two airfields went ahead as planned. This shows the

Corsairs of 1834 NAS strafing Sabang airfield (now Maimun Saleh airport), where three Japanese fighters were destroyed or damaged on the ground during the pre-dawn ‘Ramrod’, which lasted less than five minutes.





A Fairey Barracuda of the 12th Torpedo Bomber Reconnaissance Wing (818 and 817 NAS) is ranged onto its spot on the after end of HMS *Indomitable* in August 1944, during preparations for Operation *Banquet*, the attack on Padang on Sumatra's western coast. Supervising them is the petty officer in charge of the aircraft-handling team, while a young pilot looks on.

Padang, Indaroeng and Emmerhaven on the Sumatran coast were 140 miles to the north-east. Flying conditions were almost perfect, with clear skies and light winds. The first strike was launched at 0550hrs, and was made up of 20 Barracudas – ten from each carrier, escorted by 19 Corsairs from *Victorious*. The Barracudas carried four 500lb bombs each. The strike split up when it approached the coast, but the bombers found the harbours of Padang and Emmerhaven empty of Japanese warships or merchantmen. Still, as this was as much a training exercise as anything else, the bombing run went ahead. Photographs taken afterwards show that the bombs had been dropped with commendable accuracy. It helped that anti-aircraft fire was light, although one strafing Corsair was shot down, and the pilot killed.

Aircraft handlers pushing (ranging) a Fairey Barracuda into position aboard HMS *Indomitable* during Operation *Banquet*, the attack on Padang which was carried out on 24 August 1944. One of them is guiding the aircraft using a steering arm, while others push the aircraft under the direction of an unseen petty officer.

As the strike returned home a second one was flown off at 0710hrs. It was made up of 12 Barracudas (nine from *Indomitable*'s 12 TBR Wing and three from *Victorious*'s 57 TBR Wing). They were escorted by 12 Corsairs from *Victorious*'s 47 NF Wing. This time the objective was the concrete works at Indaroeng. It was the only one of its kind in the East Indies, and so its destruction would greatly hamper the Japanese ability to create reliable defence works. This time anti-aircraft fire was minimal, and another textbook bombing run was completed. The only real problem with the mission was that much of it was a waste of ordnance.

Padang and Emmerhaven were of no real military value – something the British didn't know at the time. The concrete works, though, were badly damaged, which was some consolation for the otherwise wasted operation. The other benefit was the results of the newly formed Photo Reconnaissance (PR) unit of the fleet – a flight of Hellcats based aboard *Indomitable*. They would prove their worth again during Operations *Light* and *Millet*, and would really come into their own once the fully-fledged attacks began in December.

## Operation *Light*

Just over three weeks since its last operation, the carrier strike group left Trincomalee for its next 'working up' strike. Operation *Light* was another combination of a photo reconnaissance operation (*Light A*) with a more offensive element, in this case a fighter sweep (*Light B*). The targets for the sweep were the airfields around the Sumatran city of Medan and its adjacent port of Belawan in eastern Sumatra. The photo reconnaissance mission was to take place 40 miles further north, around the harbour of Pangkalan Susu. This naval force, centred around *Indomitable* and *Illustrious*, was designated Task Force 63. The embarked air wings remained the same, while the escorting force consisted of the battleship *Howe*, the heavy cruiser *Cumberland* and eight destroyers. Once again, the force was commanded by Rear Admiral Moody, flying his flag in *Indomitable*.

Operation *Light* involved the approach to a launch area north-east of the island of Simalur, off the north-western coast of Sumatra, 200 miles due west of the objectives. Flying off was scheduled for dawn on 17 September. However, during the previous evening, after consultation with Admiral Fraser, Moody called off the operation due the torrential rain and rough seas in the area, and similar rain lashing the target area. Thinking on his feet though, rather than abandoning the whole plan, Moody and his small staff altered it. In its new form, Operation *Light A* would be a photo reconnaissance operation over Sigli and Kota Raja (now Banda Aceh) in northern Sumatra, and the Nicobar Islands, 100 miles north-west of Sabang. *Light B* was now an air strike on the port of Sigli, in the north-eastern corner of Sumatra, some 50 miles south of Sabang. Sigli was a port and rail hub for northern Sumatra, containing marshalling yards and maintenance facilities.

Corsairs from *Indomitable* preparing to take off at the start of Operation *Light*, 18 September 1944. They would strafe targets around Sigli in northern Sumatra in support of the carrier's Barracudas.

| **Operation *Light*, 18 September 1944 20 strike aircraft, 24 escorts (51 aircraft)** | |
|---|---|
| Escorts | 8 Grumman F6F-3 Hellcat fighters (5 NFW FAA – *Indomitable*) |
| | 16 Vought F4U Corsair fighters (47 NFW FAA – *Victorious*) |
| Strike Aircraft | 10 Fairey Barracuda TBRs (12 TBRW FAA – *Indomitable*)<br>10 Fairey Barracuda TBRs (57 TBRW FAA – *Victorious*) |

The flying-off position was moved northwards, to a point 130 miles due west of Sigli, and 100 miles south-west of Sabang. The operation began before dawn on Monday 18 September. First in the air at 0540hrs were the Hellcats of *Indomitable*'s photographic reconnaissance flight. These were followed by the strike aircraft and their escort at 0600. This strike consisted of ten Barracudas from each carrier, escorted by eight Hellcats from *Indomitable* and 16 Corsairs from *Victorious*. Once these were in the air a strong Combat Air Patrol was launched, using fighters from both carriers. Problems plagued the launch and forming up though, with one Barracuda from *Indomitable* ditching on take-off, and three Hellcats having to return to the carrier with engine problems – the result of being ranged on deck during the previous day's rain. Fortunately for the three-man crew of the Barracuda, the submarine *Spirit* was on hand to rescue them. Less fortunately the boat was then strafed by a pair of Helldivers, part of the Task Force's CAP screen. The inexperienced fighter pilots, though, didn't hit anyone.

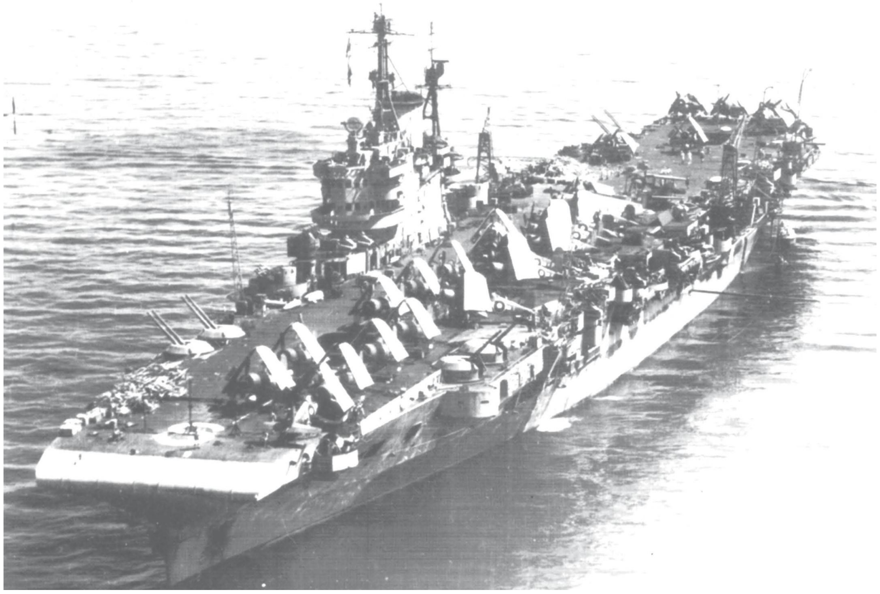
Operation *Light* on 18 September 1944 involved a 'Ramrod' sweep over Medan and Belawan in eastern Sumatra, and the bombing of the railway yards at Sigli, at the north-eastern tip of Sumatra. Sigli was bombed by Barracudas from *Victorious* (827 and 829 NAS) and *Indomitable* (815 and 817 NAS), and while the target was badly damaged, the whole operation was undermined by problems, both technical and operational. This photograph taken from a Hellcat shows Sigli under attack.

By 0640hrs, however, a few minutes after dawn, the strike headed towards its target. Once there, Sigli was all but blanketed by low clouds and heavy rain. Fortunately, they found that anti-aircraft fire was virtually non-existent, and proved no real threat to the attacking aircraft. So, after approaching their target from the south-west, the Barracudas released their payload over the rail yards from a height of 2,000–3,000ft. Each bomber carried four 500lb bombs, so a total of 36 were dropped over the target. Afterwards, photo reconnaissance showed that the attack had been surprisingly accurate, given the weather. By contrast the PR operation went smoothly, and good-quality photos were taken of much of northern Sumatra, and the Nicobar archipelago's islands of Little and Great Nicobar. These would prove extremely useful in the next fleet operation, codenamed Operation *Millet*.

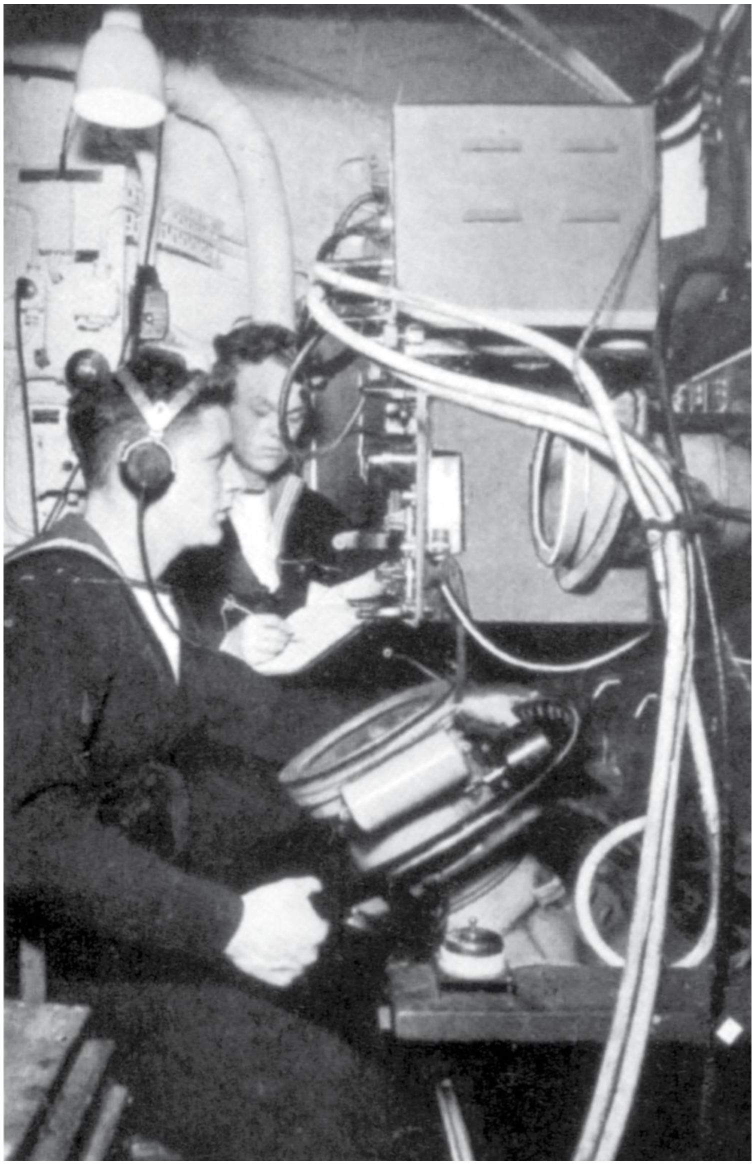
## Operation *Millet*

Operation *Light* had highlighted a number of problems, which Rear Admiral Moody raised in his report to Admiral Fraser. The take-off and forming up of the aircraft had been far too slow, and would be unacceptable when operating with the US Navy. Clearly the lessons learned by the air crews of *Illustrious* still had to be fully accepted by the newcomers of *Indomitable* and *Victorious*. Communication had been poor, with some inexperienced air crews leaving radio transmitters on, blocking out other transmissions. When landing, the carriers were too close together, which meant that the landing patterns of aircraft waiting to touch down became dangerously overlapped. This, though, was all due to inexperience, particularly among the officers and crew of *Indomitable*.

Also, a lack of decent intelligence had hampered the operation, as apart from the obvious target of the rail yards, no other potential targets had been identified. So, after the bombers flew off, the Corsairs from *Victorious* peeled off from the escort, to conduct strafing attacks over the city. This is where the lack of intelligence failed them. As one report claimed: ‘After the attack, the fighters roamed the area looking for the most impressive buildings in the area. These would then be machine gunned in the hope that the Japanese overlords were in residence.’ This was a problem which Moody hoped to address through the expansion of his photo recon unit. However, he also requested a stepping up of long-range reconnaissance flights conducted by the RAF and RAAF from bases in Ceylon, India or Western Australia.



The Illustrious-class aircraft carrier HMS *Victorious* joined the Eastern Fleet in July 1944, and remained with the British Pacific Fleet until the end of the war. She had two squadrons of Corsairs embarked (1834 and 1836 NAS), but in November 1944, in the aftermath of Operation *Millet*, her two Barracuda squadrons were replaced by a single squadron of Avengers (949 NAS). This shows her as she looked in early 1945.



Radar was a major boon to the British Pacific Fleet. All of its major warships carried Air Search Radars, such as the Type 79, Type 279 or Type 281 arrays which could detect approaching aircraft at ranges of up to 90 miles. Closer in, the modern Type 277 set, with a range of around 30 miles, was highly accurate and could be used to vector in intercepting aircraft from the carrier's CAP.

Before he read the report, Admiral Fraser had hoped to commence fully-fledged air operations against targets in Sumatra. Now, he realized that the carrier strike force needed at least one more 'working up' operation, to help iron out all these problems. This time, the target he and Moody chose was the Nicobar Islands. This strike would be codenamed Operation *Millet*. At the request of Admiral King of the US Navy, Fraser and Moody timed the operation to coincide with General MacArthur's landings on Leyte in the

Philippines, which were scheduled to begin on 20 October. It was hoped that an attack by the Eastern Fleet might encourage the Japanese fleet to delay its reaction to this American offensive.

Moody's force, designated Task Force 63, left Trincomalee on 15 October. As before, the force was centred around *Indomitable* and *Victorious*, escorted by the AA cruiser *Phoebe* and four destroyers. As before, Moody flew his flag in *Indomitable*. There were two other naval groups in the operation; the battlecruiser *Renown*, flagship of Vice Admiral Power, screened by three destroyers, and the heavy cruisers *Cumberland*, *London* and *Suffolk* with four destroyers. Both of these groups were to perform shore bombardment missions in support of air strikes from the carrier group. They reached the islands undetected, and by the early hours of Tuesday 17 October they were approaching their flying-off point, 120 miles west of Little Nicobar Island. At 0500hrs that morning, three minutes before dawn, ten Barracudas of 12 TBR Wing were flown off from *Indomitable*, together with eight Hellcats from 5 NF Wing. After forming up – conducted much more efficiently than before – the strike headed off to the north-west. Their mission was to bomb the harbour of Nancowry Island in the centre of the Nicobar archipelago.

Once *Indomitable* launched her strike, *Victorious* did the same, putting 19 Corsairs into the air from 47 NF Wing. They would strafe any targets that presented themselves on the two islands. The air strike on Nancowry was highly successful. The one Japanese supply ship in the anchorage, the *Ishikari Maru*, was sunk following a direct hit from a 500lb bomb. However, one Barracuda from 817 NAS crashed into the harbour, having left it too late to pull out of a dive. Her crew were killed outright. The small port was badly damaged by the bombing raid, and the remaining Barracudas returned to their carriers, their crews pleased at a job well done. The strafing runs were equally productive, shooting up shore defences, barracks and supply dumps in the two islands.

The Japanese had been taken by surprise with the air strike, and had only begun to react to it when the raid was over. However, they were ready for the fighters when they came, and the anti-aircraft fire was heavy. As a result, two of the Corsairs were shot down over the north-east side of Nancowry, and three more fighters were damaged. The damaged fighters, though, managed to make it back to *Victorious*. Less fortunate was one of the Hellcats from *Indomitable* which had provided the escort for the air strike. It crashed on the carrier's deck while landing, and the pilot was killed. So, while the air operation had been successful, it had cost Moody four aircraft, while three more were damaged. Nevertheless, TF 63 would remain in the area, hoping to elicit some reaction from the Japanese fleet. The following morning the strikes would be repeated, albeit on a slightly smaller scale, and with less tangible results. This time though, all of the aircraft made it back safely.

Meanwhile the two bombardment groups had left the carrier group on Monday evening, and by dawn the next day they were 90 miles to the north-east, lying off the northernmost island in the archipelago, Car Nicobar. A small CAP screen flew over both surface groups, while a Hellcat spotter plane was supplied by *Indefatigable*. Shortly after dawn *Renown* took up station to the east of the island, while the heavy cruisers moved into position to the west. Both groups were under orders to fire at selected targets on shore, along with any targets of opportunity that presented themselves. The key target on Car Nicobar was the Japanese airfield there, just to the south of the small harbour of Malacca, on the island's eastern shore. Others included a six-gun coastal battery, army barracks and store facilities. When it came, the bombardment was devastating, with all targets destroyed.

Then the destroyers closed in, attacking the harbour from close range, as well as the Japanese shore defences and small harbour at Mus, on the northern tip of the island. Afterwards the bombardment groups lingered in the area, hoping to provoke a Japanese reaction that never materialized. The two groups regrouped during the night, but the following morning they returned, and conducted another hour-long bombardment of Malacca and its airfield. Late on 18 October the two bombardment groups rejoined the carrier strike force, which was now 50 miles south-east of Nicobar Island. Moody's aim was still to provoke the Japanese into reacting to his presence, either by dispatching a surface group from Singapore, or by launching air strikes.

At dawn on 19 October TF 63 was concentrated some 15 miles south-west of Car Nicobar. Moody's CAP screen was in place, while Barracudas were sent out in a reconnaissance sweep over the Andaman Sea to the east, and also to the south-west, towards the Straits of Malacca. However, the seas were empty. At 0840hrs, though, a two-engined Japanese bomber was sighted, flying at high altitude over the task force. An anti-aircraft barrage was fired, and Hellcats attempted to climb to intercept it, but the Japanese aircraft escaped into the clouds. Then, at 0940hrs, a group of enemy aircraft was detected by air search radar, and Hellcats from *Indomitable* were sent out to intercept it. They failed to make contact among the low clouds though, but

Corsairs from *Victorious* had more luck, and intercepted the enemy 10 miles east of the Task Force, and due south of Car Nicobar.

They turned out to be a squadron of 12 Ki-43 'Oscar' fighters belonging to the Japanese Army, operating from an airfield on Phuket in Thailand. Most were flying at 7,000ft, but a flight of three Oscars provided 'top cover' for the squadron at 16,000ft. The two groups of fighters clashed at 0950hrs, with the outnumbered flight of three Corsairs attempting to hold their own in a dogfight against the main force of nine Japanese fighters. The Corsairs, though, were soon reinforced by other CAP elements, most of them from *Victorious*. It was a hard-fought scrap, but eventually, at 1030hrs, the surviving Japanese fighters broke off the action and headed off to the south-east. Four of the Oscars had been shot down in the dogfight, for the loss of two Corsairs from *Victorious* and a Hellcat from *Indomitable*. Most of the remaining Japanese planes were damaged.

Meanwhile, while this had been taking place, Hellcats from *Indomitable* had been guided towards the Japanese top cover flight by their carrier's fighter controller, using air search radar. This helped the six Hellcats climb above and behind the Japanese. As a result, the Japanese pilots were taken unawares. In the brief one-sided fight that followed, all three of the Zeros were shot down. That was the only sign of the Japanese that morning, and so at noon Moody ordered the task force to retire to the west, and return to Trincomalee. Operation *Millet* had been a fairly costly business, with the carrier group losing eight airmen and seven aircraft: four Corsairs, two Hellcats and a Barracuda. One of the Corsair pilots shot down in the dogfight survived, and was rescued. However, this successful operation, and the clear victory in the dogfight, really boosted the morale of the carrier crews. So this time, when Rear Admiral Moody submitted his report, he noted that while there were still areas that needed work, generally there was marked improvement in the combat abilities of his carrier strike force, and in the skills of his air crews. This, though, would be Moody's last operation. In December he was promoted to Vice Admiral, and sent ashore, as Flag Officer (Air), East Indies Station, based in Colombo.

The Japanese Nakajima Ki-43 *Hayabusa* (‘Falcon’), or ‘Army Type 1’ fighter was codenamed ‘Oscar’ by the Allies. Essentially, though, it was a land-based version of the highly successful Mitsubishi A-6M ‘Zero’ fighter embarked in Japanese carriers. These were very manoeuvrable fighters, and were the primary foe of the Fleet Air Arm in the Sumatran campaign.

## Operation *Robson*

For much of 1944, from April to October, the Eastern Fleet’s carriers had spearheaded seven operations, each of them involving air strikes on Japanese targets in the Dutch East Indies. These ranged from Port Blair in the Andaman Islands down to Surabaya in Java, almost 2,000 miles away to the south-east. They spanned the whole curve of the western edge of the East Indies. The first two, Operations *Cockpit* and *Transom*, had been carried out in conjunction with the USS *Saratoga*, an aircraft carrier of the US Navy, in an attempt to familiarize the British with the American way of doing things. Until then, the Fleet Air Arm had virtually no experience of launching multi-carrier strikes. So, for the next six months, the Eastern Fleet’s carrier strike force and its air crews would work hard to take all these lessons on board. The aim, of course, was to reach a level of proficiency which would allow the Eastern Fleet to operate alongside its American Allies, without disgracing itself.

A month before, Admiral Fraser decided that this long period of ‘working up’ operations was now over. Rear Admiral Moody, who was also about to hand over his command to Rear Admiral Vian, had convinced him that after Operation *Light*, the attack on Sigli in late September, his carrier strike force was ready to go over onto the offensive. Moody’s last sortie, Operation *Millet* in late October had demonstrated this new spirit of professionalism in the carrier fleet. Small mistakes were still being made, and there was room for improvement, but the carrier strike force, working alongside Vice Admiral Power's surface ships, had actually taken the fight to the enemy, and demonstrated that the lessons learned in the six months of 'working up' had been absorbed. Now, with reinforcements due from Britain, as Moody put it to his men, it was 'time to take the war to the enemy in earnest'.

Thanks to commanders like Somerville, Fraser and Moody, the Eastern Fleet – soon to become the British Pacific Fleet – had spent much of the year, evolving into a potent fighting force. The two commanders had already prepared for this moment, and they and their staff had developed plans for a series of large-scale attacks on Japanese-held Sumatra. Codenamed Operation *Outflank*, these would involve a methodical sequence of air strikes, designed to knock out oil production and refining facilities on the island. These would involve carrier strikes against the key oil production site of Pangkalan Brandan in north-eastern Sumatra, and Pladjoe, Palembang and Songei Gerong in the south-east of the island. The first of these was Operation *Robson* – the strike against Pangkalan Brandan.

Just before it was due to be launched, though, Moody handed over the baton of command to his successor, who took up command of the Eastern Fleet's carriers on 15 November, hauling up his flag in HMS *Indomitable*. Moody's replacement was Rear Admiral Sir Philip Vian, a destroyer man at heart, hero of the *Altmark* incident, the sinking of the *Bismarck* and the Malta convoys. Despite his lack of experience in carrier operations, Vian proved to be a natural carrier commander, and would remain in his new post until the end of the war. A month after stepping into the role of Flag Officer Commanding (Aircraft Carriers), Eastern Fleet, he went on his first operation. By then *Illustrious* had returned from her refit, and *Victorious* had left for hers, so that left Vian with his flagship *Indomitable* and *Illustrious*. This, though, would be enough to make Operation *Robson* a success.

Meanwhile, another change of command was taking place. At noon on 22 November 1944, in Trincomalee, Admiral Fraser hauled down his flag as commander of the Eastern Fleet. Moments later he hauled it up again, this time as Commander-in-Chief of the British Pacific Fleet. At the same moment, the East Indies Fleet was created under the command of Admiral Arthur Pound, who until that moment had commanded the Eastern Fleet's 1st Battle Squadron, flying his flag in *Renown*. He in turn would be succeeded by

Vice Admiral Henry Rawlings, a veteran of the Mediterranean Fleet. So, with the stroke of a pen and a raising of a flag, Admiral Fraser had a rebranded fleet to command. He also now had two highly experienced deputies in Vice Admiral Rawlings and Rear Admiral Vian. From that point on, the British Pacific Fleet would embark on a major air campaign against Sumatra, drawing on all the experience gained during the long ‘working up’ period.

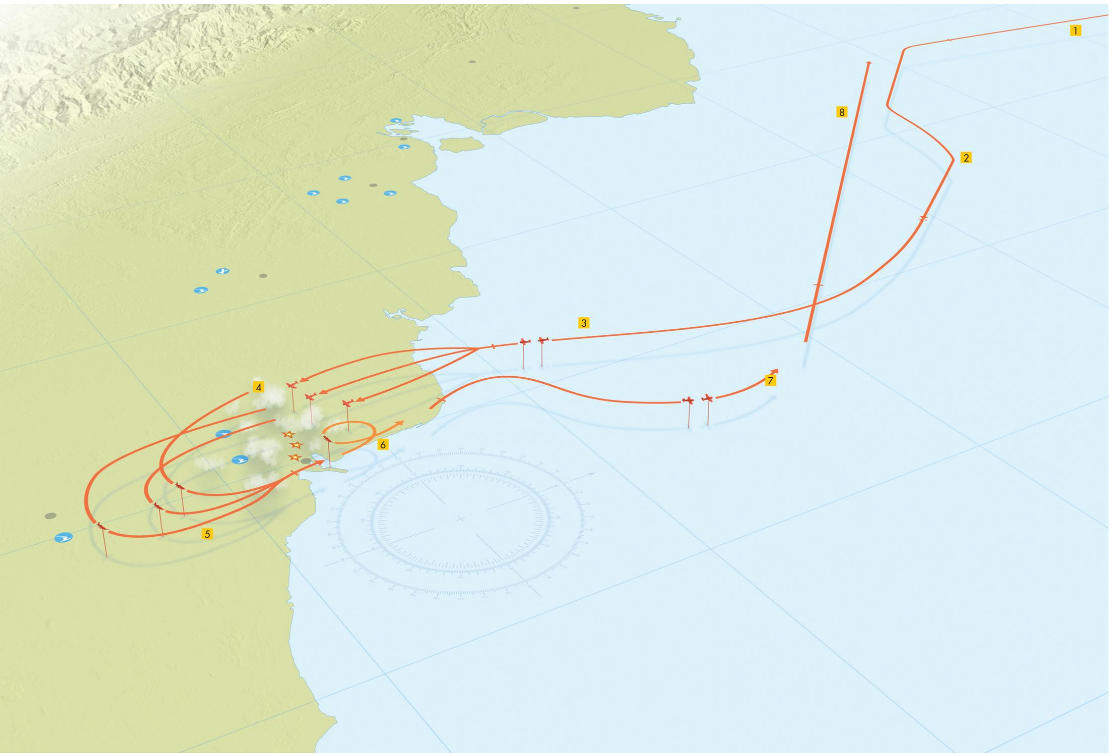
The attack on the Japanese naval base at Surabaya in Java on 17 May 1944. The port was used by the Japanese Navy as an anti-submarine base, and so was an important target, as it threatened the operation of US submarines operating in the Java Sea. They in turn were primarily there to sever Japan’s flow of fuel oil from Sumatra to Japan.

## Operation *Robson*, 20 December 1944

### The air strike on Belawan Deli

This operation was a daring one, as it involved entering the Malacca Strait, within easy reach of the Japanese naval base at Singapore. Dive bombers from Rear Admiral Vian’s two carriers *Indomitable* and *Illustrious* were to launch an air attack on the oil refinery at Pangkalan Brandan, the largest oil plant in northern Sumatra. On the day of the attack, though, while the aircraft were approaching the target, the attack was called off due to low cloud and squally rain obscuring the target. Instead, they continued on to attack a secondary target, Belawan Deli, the port of the large Sumatran city of Medan. Again, though, weather conditions made it hard for the airmen to locate the target, and some didn't manage to attack it at all. Others were able to bomb the harbour on a second attempt. Although the operation was deemed a moderate success, the oil refinery was untouched. So, another operation had to be launched to target this key strategic target. *Robson* also highlighted other problems that had to be dealt with by Vian before the next operation was launched.

Flying conditions: partial cloud over Pangkalan Brandan (2,000ft), light winds from SE, occasional heavy rain squalls, visibility below 10 miles.



**Task Force 67** (Rear Admiral Vian)
*Indomitable* (flag):
1839 NAS (15 Hellcat fighters)
1844 NAS (14 Hellcat fighters)
857 NAS (21 Avenger dive bombers)

*Illustrious*:
1830 NAS (15 Corsair fighters)
1833 NAS (14 Corsair fighters)
854 NAS (21 Avenger dive bombers)
Escort: 3 cruisers (*Argonaut*, *Black Prince*, *Newcastle*) and 6 destroyers.

## EVENTS

**1.** 0800hrs: The strike is 40 miles to seaward of the target, approaching at 8,000ft, at 160 knots. However, after reports reach Vian from reconnaissance aircraft, the strike is switched from Pangkalan Brandan to secondary target, Belawan Deli.
**2.** 0815hrs: The strike becomes disorganized, as due to communication problems some squadrons take time to follow directions onto the new course. The aim is to keep well to seaward of land, to reduce the risk of being spotted.
**3.** 0825hrs: The strike splits into three components: 854 NAS (16 Avengers from *Illustrious*), 8597 NAS (12 Avengers from *Indomitable*) and 1830 NAS (four bomb-armed Corsairs from *Illustrious*). Escort is provided by 26 Hellcats from *Indomitable* (1839 and 1844 NAS) and 12 Corsairs from *Illustrious* (1833 NAS). Of these, 18 Hellcats provide top cover, the rest close cover, while the Corsairs are middle cover. Approach height is 8,000ft.
**4.** 0832–0834hrs: The Avengers attack the harbour in two squadron-sized groups, a minute apart. 857 NAS is echeloned to port of 854 NAS. However, many of the Avengers fail to spot their target amid rain squalls over the area, and so fail to release their four 500lb bombs. The Corsairs, further to the west, are unable to locate the target at all. Anti-aircraft fire from the target is light, and due to the poor visibility proves harmless. No aircraft are hit.
**5.** 0834hrs: The strike turns to port, and the three elements attempt to reform. Hellcats shoot down a twin-engined Japanese

aircraft – probably a Ki-46 ‘Dinah’ reconnaissance plane which crashes into the sea east of the target.

**6.** 0841hrs: The strike leader permits those who still have their ordnance to conduct another attack. For almost 20 minutes, as the rest of the strike fly in a holding pattern to seaward of Belawan Deli, the remainder drop their bombs on any suitable targets they can see through the cloud and rain. The strike reforms by 0900hrs and begins its return. Four Corsairs from *Illustrious* are forced to release their bombs over the sea, as they failed to spot the target.

**7.** 0910hrs: The somewhat ragged formation begins to form again, and the fighter cover resumes its position above, beside and ahead of the bombers. The strike flies parallel to the coast, towards the waiting carrier strike force.

**8.** 0930hrs: When the strike is to the north of Tamiang Point, the carriers pick them up and begin the process of guiding them home. The force is 110 nautical miles to the north-north-west. It is still somewhat disorganized due to poor visibility, so the strike leader orders it to circle, to allow stragglers to catch up. They reach the carriers at 1026hrs, and begin landing-on two minutes later. All aircraft are recovered successfully.

In November 1944, Rear Admiral Sir Philip Vian (1894–1968) became the commander of the Eastern Fleet’s carrier strike force. It was Vian who had the job of commanding this powerful force during the climax of the air campaign against Sumatra.

When the British Pacific Fleet was formed, Vice Admiral Bernard Rawlings (1889–1962) became its second in command, flying his flag in the battleship HMS *King George V*. A skilled commander, who had distinguished himself in the Mediterranean, he realized his task was primarily to support Rear Admiral Vian's carrier strike force.

By this stage Vian's two fleet carriers had replaced their Barracudas with Avengers, which gave their TBR Wings a greatly improved strike range, and improved performance. This would make all the difference in the operation which lay ahead. The two fleet carriers formed the core Task Force 67, while their screening force was made up of three cruisers (*Newcastle*, *Argonaut* and *Black Prince*) and five destroyers. TF 67 left Trincomalee on 17 December, just four days after Vian assumed command of the Eastern Fleet's carriers. The following day, while heading across the Indian Ocean, they rendezvoused with a refuelling group, designated TF 69: the RFA tanker *Wave King* and an escorting destroyer. This was necessary to extend the range of Vian's destroyer screen.

In the late evening of 19 December, TF 67 passed between Great Nicobar and Sabang, and by dawn on 20 December it was at the entrance of the Malacca Strait. This was deep within enemy territory – Thailand lay off their port beam, and Sumatra lay to starboard. Vian, though, thought this a risk worth taking. In effect he was making a statement: these waters were no longer the sole preserve of the Japanese. The British could now contest these seas whenever they wanted. Dawn that morning came at 0642hrs, revealing a misty, overcast morning which didn't bode well for the operation. The task force reached its flying-off position at 0600hrs, 115 miles west-north-west of Sabang, and 130 miles north-north-east of the target, the oil refinery at Pangkalan Brandan.

The first CAP fighters took off before dawn at 0610hrs, and began forming up over the task force. Then the strike aircraft were formed up. At 0715hrs, a strike of 27 Avengers took off, 15 from *Indomitable* and 12 from *Illustrious*. They were escorted by 28 fighters: 14 Hellcats from *Indomitable*, and 14 Corsairs from *Illustrious*. The strike aircraft reached Pangkalan Brandan at 0810hrs, but found that the mist there was too thick to let them see their target.

The Fleet Air Arm thought the Grumman Avenger Mark I was an excellent bomber, being robust, agile and reliable, with a greater range than the Barracuda it replaced. Its power-operated gun turret behind the cockpit was a great boon to the Avenger's defensive capability.

| **Operation *Robson*, 20 December 1944 27 strike aircraft, 28 escorts (55 aircraft)** | |
|---|---|
| Escorts | 14 Grumman F6F-3 Hellcat fighters (1844 NAS/5 NFW – *Indomitable*) |

| | |
|---|---|
| | 14 Vought F4U Corsair fighters (1830 NAS/15 NFW – *Illustrious*) |
| Strike Aircraft | 15 Grumman Avenger TBFs (857 NAS – *Indomitable*)<br>12 Grumman Avenger TBFs (854 NAS – *Illustrious*) |

Fortunately, Vian and his staff had catered for this, and the strike was switched to an alternate target – the oil port of Belawan, 30 miles down the coast, and 12 miles north-east of the city of Medan. This time the oil storage tanks and harbour facilities were laid out before them, and the attack went ahead. Once again, the Japanese seemed unprepared, and the anti-aircraft fire was minimal, although it built up in volume as the attack progressed. Better still, there was no sign of Japanese aircraft, so at 0835hrs, after the Avengers dropped their payload, the Corsairs and Hellcats took turns to strafe the port and the ships lying off it. By 1100hrs, all the aircraft had landed back on their carriers. This time there were no losses. So, Vian gave the order to withdraw.

They fully expected a Japanese air attack, but it never came. Instead, by 1645hrs, the task force was 35 miles to the north of Sabang. So, with sunset due at 1800hrs, Vian felt he had just enough time to launch one more strike. Essentially, he intended to attack Sabang, just to make sure the Japanese there knew they hadn't been forgotten. Again, he was making a point. So, at 1730hrs, the strike was repeated, and at 1750 Vian's fighters strafed the island's small port and the two airfields there. Again, no aircraft were lost, and they had all landed back on their carriers a few minutes after sunset. All in all it had been a hugely successful operation. Above all, it proved that the fleet's carrier strike force was now a highly efficient fighting force. The task force reached Trincomalee on 22 December.

## Operation *Lentil*

Almost as soon as Vian's task force had returned, preparations were begun for the fleet's next operation. Codenamed Operation *Lentil*, this would involve a return to Pangkalan Brandan, the target which, thanks to mist and low cloud, had been spared from attack during Operation *Robson*. This would involve three carriers, *Indefatigable*, *Indomitable* and *Victorious*, carrying a combined total of 165 aircraft. That made it the largest fleet air operation yet in the East Indies. Vian would command the force, designated Task Force 65, flying his flag in *Indomitable*. His surface screen would be made of one heavy cruiser (*Suffolk*), two light cruisers (*Black Price* and *Ceylon*) and the

AA cruiser *Argonau*t, accompanied by eight destroyers drawn from the 25th and 27th Destroyer Flotillas.

This time, rather than repeat the sortie into the Malacca Strait, Fraser and Vian opted for an altogether safer approach to the target from the west, with the aircraft flying over Sumatra from a flying-off position in the Indian Ocean. Fraser felt that an approach to the target from the northern end of the Malacca Strait left the task force far too vulnerable to massed attacks from Japanese land-based aircraft in Sumatra, Thailand and Malaya. It had worked for Vian during Operation *Robson*, but now, Fraser expected that the Japanese would be anticipating such a move. The drawback of the Indian Ocean launch point, though, was that the strike aircraft would have to fly for another 85 miles after crossing the Sumatran coast. Then, they'd have to cross the mountainous spine of the island, which meant climbing to 11,000ft in order to clear it. This lengthy approach ran the risk of losing the element of surprise. Still, Fraser felt this was a risk worth taking, compared to the more dangerous approach from the north.

Operation *Lentil* began on New Year's Day, when TF 65 sailed from Trincomalee. Again, a refuelling operation was conducted in the Indian Ocean during the approach to Sumatra. All of the escorting destroyers were successfully refuelled while underway by the RFA tanker *Wave King*, which would do the same during the return voyage. By the evening of 3 January Vian's force had reached a point some 75 miles from the Sumatran coast, and 40 miles to the north-west of the large island of Simeulue (known as Simalur by the British), which lay 70 miles off the Sumatran mainland. Vian's intention was to enter the channel between the island and the Sumatran mainland, and then keep in the centre of it, while moving parallel to the coast until he reached the flying-off point shortly after dawn. So, during the early hours of Thursday 4 January, TF 65 turned towards the south-east, and steamed down the channel. Dawn that morning was at around 0640hrs.

Operation *Lentil* on 4 January 1945 was the second of the Operation *Outflank* strikes – the main air offensive against Sumatra. Here, Avengers from 820 NAS, flying from HMS *Indefatigable*, begin their attack on the Pangkalan Brandan oil refinery in eastern Sumatra. The smoke over the target is the result of rocket attack by Fireflies from the carrier's 1770 NAS, carried out moments before.

| **Operation *Lentil*, 4 January 1945 32 strike aircraft, 32 escorts, 38 sweep fighters (102 aircraft)** | |
|---|---|
| The 'Ramrod' Force | 13 Grumman F6F-3 Hellcat fighters (1839 NAS – *Indomitable*)<br>13 Vought F4U Corsair fighters (1836 NAS – *Illustrious*) |
| Air Defence Sweep Force | 12 Fairey Firefly fighters (1770 NAS – *Indefatigable*) |
| The Main Strike Force | |
| Escorts | 14 Grumman F6F-3 Hellcat fighters (1844 NAS – *Indomitable*)<br>18 Vought F4U Corsair fighters (1843 NAS – *Victorious*) |
| Strike Aircraft | 16 Grumman Avenger TBFs (857 NAS – *Indomitable*)<br>16 Grumman Avenger TBFs (849 NAS – *Victorious*) |

By then, Vian was approaching his flying-off point from the west, and at 0600hrs his carriers turned into the wind to launch the 'Ramrod' strike. It was made up of 26 fighters: 13 Hellcats of 1839 NAS from *Indomitable* and 13 Corsairs of 1836 NAS from *Victorious*. Once they were airborne, the main strike began forming up. Once formed up the fighters flew off. From the flying-off point it was between 120 and 140 miles to their targets, the Japanese airfields at Bindjai, Medan and Tandjung Pura (then Tandjonpoera), all of which were in the vicinity of Belawan and Medan, about 30 to 40 miles south of the bomber's target. This 'Ramrod' proved moderately successful. It lasted around 20 minutes, from 0700hrs on. The fighters split up after attacking Medan, with the Hellcats strafing Tandjung Pura airfield, and the Corsairs targeting Bindjai.

Afterwards, it was claimed that 20 Japanese aircraft were destroyed on the ground, while a twin-engined Mitsubishi Ki-21 'Sally' bomber and a twin-engined Mitsubishi Ki-46 'Dinah' reconnaissance aircraft were both shot down in the air over Medan and Bindjai. After regrouping over Bindjai the 'Ramrod' fighters headed back towards the south-west, climbing to cross the Wilhelminas, and then at 0800hrs diving again for a final strike at the small airfield at Trumon (then Troeman), on Sumatra's western coast, 35 miles to the south of Tupak Tuan. Afterwards, the fighters returned to their carriers, and by 0830hrs all of them had landed safely. One Hellcat from 1839 squadron was damaged, though, having struck a tree during its strafing attack.

Meanwhile, back in the Indian Ocean, the main strike was launched at 0740hrs. It consisted of two elements. First, 12 Fairey Fireflies of 1770 NAS took off from *Indefatigable*. They were armed with rockets, and their task was to attack targets of opportunity around Pangkalan Brandan. These were followed by the main strike force, made up of 32 Avengers, half each from *Indomitable* (857 NAS) and from *Victorious* (849 NAS). The less-experienced Avenger crews from 820 NAS embarked in *Indefatigable* were not used. Instead they were used in a defensive capacity, to fly routine patrols and anti-submarine sweeps around the task force. The Avengers were escorted by a powerful force of 32 fighters: 18 Corsairs from *Victorious* (1843 NAS) and 14 Hellcats from *Indomitable* (1844 NAS). The Seafires of 887 NAS and 894 NAS embarked in *Indefatigable* provided the CAP screen over the task force. Finally, six Hellcats from 888 NAS flew off from Indefatigable, to conduct photo reconnaissance of the target area, and other likely future targets in the vicinity.

The Mitsubishi Ki-46 (or Type 100 Command Reconnaissance Aircraft) was a twin-engined two-seater reconnaissance plane, codenamed ‘Dinah’ by the Allies. Although these were available in Sumatra, they were rarely used in a marine reconnaissance role, which might have forewarned the Japanese of the approach of a British task force into Sumatran waters.

One of the Corsairs from 857 Squadron had to return to *Indomitable* shortly after take-off, and landed on safely. A second Corsair from 849 squadron was less fortunate, and the pilot had to ditch just off the Sumatran coast, near Tapak Tuan, 32 miles from the flying-off point. The three-man crew took to a dingy, and were spotted by returning strike aircraft. Eventually, at 1125hrs, they were rescued by the destroyer *Undine*. The rest of the two strike elements – the rocket-armed Firefly fighters and the main bomber strike, approached the target from the south-west, crossing the coast at Tapak Tuan at 0759hrs, while climbing steadily to 12,000ft. This allowed them to fly over the high spine of the Wilhelmina mountain range at 12,000ft.

By 0820hrs they were over it, at which point the main strike force caught sight of Pangkalan Brandan some 15 miles ahead of them. So, they began their bombing run. As they did so, the Fireflies of 1770 squadron broke away from them, and began a shallow dive to 3,000ft, ready to attack either one of their pre-selected targets, or anything else that seemed worthy of their rockets. Their main objectives were the anti-aircraft guns clustered around Pangkalan Susu, a few miles north of the main target area. Their attack went in at 0825hrs, and all 48 rockets were launched at the gun batteries, from ranges of as little as 400yds. For good measure the Fireflies strafed the batteries as they flew past, before turning away to the north and west, and returning to the carriers.

As for the main strike, as the Avengers approached their target they split into two groups. 857 Squadron from *Indomitable* banked to starboard before making their final bombing run to hit Pangkalan Brandan's main oil refinery, and released their bombs over the target at 0831hrs. Two minutes later the Avengers of *Victorious*'s 849 Squadron bombed the former Royal Dutch Shell plant at Edeleanu, a little to the north-east. Both strikes were successful, with over 50 500lb bombs dropped over each target, with a reasonable degree of accuracy. However, fires from burning oil tanks had obscured the targets slightly after the first bombs fell, making it harder for the air crews behind them to release their bombs directly over their target. Still, a couple of days later, photo reconnaissance by 888 Squadron's PR Hellcats confirmed that both targets were severely damaged, with 13 oil tanks hit, as well as the pumping house and power plant, and oil fires were still burning over Pangkalan Brandan. The strike, then, had achieved its objective.

Supermarine Seafires ranged on deck during an inspection, 1944. These fighters, although less robust that larger Corsairs, Fireflies or Hellcats, were extremely manoeuvrable, and excellent in a dogfight. So, while the larger fighters were primarily used to escort strike aircraft, Seafires were often used to fly a protective CAP over the task force.

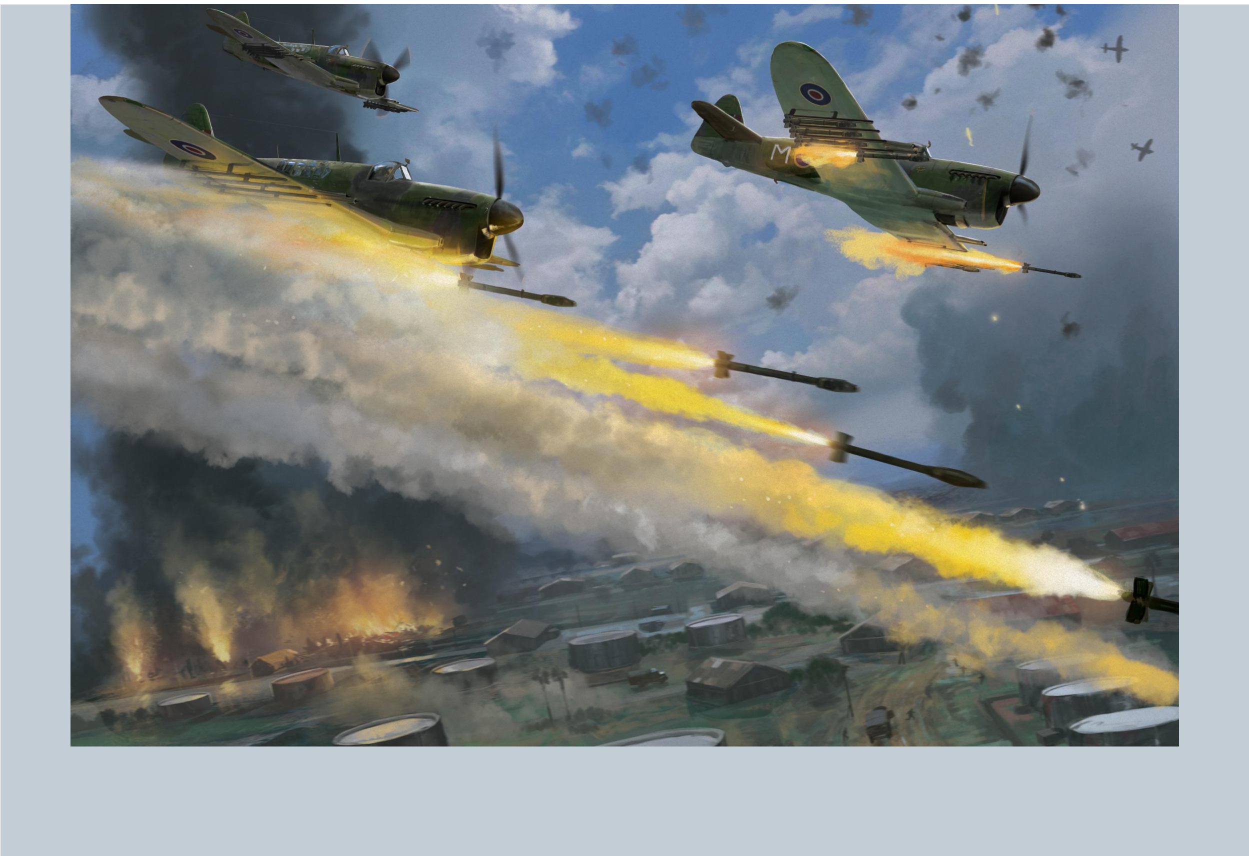
The two-seater Fairey Firefly entered service with the Fleet Air Arm in 1943, as a replacement for the lacklustre Fairey Fulmar. During the Sumatran campaign the only Firefly squadron in the British Pacific Fleet was 1770 NAS, embarked in HMS *Indefatigable*. This versatile aircraft certainly proved its worth, though, when the squadron conducted rocket attacks on ground defences during the Palembang strikes.

However, this came at a price. A Firefly was badly damaged by anti-aircraft fire, but managed to limp off to the coast before the pilot ditched in the sea. He was subsequently rescued. Then, at 0840hrs, just as the strike aircraft were flying over the island's eastern coast, and banking away to the north and west a squadron-sized formation of Japanese fighters appeared from the south – the direction of Medan. The escorting fighters intercepted them, and a dogfight ensued over Pangkalan Brandan. One Avenger was damaged, before the escorting Corsairs and Hellcats could intervene, but they managed to screen the bombers as they withdrew, and drove off the Japanese fighters. At least seven of these Zeros were shot down, although 12 kills were claimed, for no British losses. It seems that the Japanese attack was half-hearted, and lacked coordination.

## Operation *Lentil*: strike on Pangkalan Brandan, 4 January 1944

Operation *Outflank*, the full-scale air offensive by the British Pacific Fleet on Sumatra's oil production centres, began with Operation *Robson*, an attack on the Royal Dutch Shell oil refinery at Pangkalan Brandan in north-eastern Sumatra on 20 December 1944. Bad weather, though, forced Vian to switch targets to the port of Belawan Deli, 30 miles down the coast. So, Operation *Lentil*, carried out on 4 January 1945, was a second attempt on Pangkalan Brandan. It involved 76 aircraft from HMS *Indefatigable*, HMS *Indomitable* and HMS *Victorious*, making it the largest air strike mounted to that point by the fleet's carrier strike force.

The main attack was preceded by the 12 Fireflies of 1770 NAS operating from HMS *Indomitable*. At 0825hrs they dived towards the refinery and banked during their final approach, before firing rockets at pre-selected targets from ranges of 400 to 800yds. The Japanese had been taken by surprise, and there was little or no anti-aircraft fire. The rocket attack shown here caused mayhem in the refinery, setting fuel tanks alight and destroying pumping facilities. The Fireflies then went on to strafe the small dock on the far side of the refinery, setting a tanker alight. The main attack by the Avenger squadrons took place a few minutes later, and effectively finished the job – wrecking the refinery's pumping house, power house and most of its oil storage tanks. Operation *Lentil* was a success, but it revealed organizational problems which would be rectified before the fleet launched its main attack on Palembang three weeks later.



After the attack the bombers returned to the carriers following the route they had taken during their approach to the target. By 0900hrs they were clear of Pangkalan Brandan, and began climbing over the Wilhelmina range. They dropped down again at 0917hrs when they crossed the coast, and reached the waiting carriers at 0930, when the first of the returning aircraft began landing-on. However, one of the Hellcats from 1844 Squadron was badly damaged when landing on *Indomitable*. Vian's task force lingered in the area until noon, waiting for two detached destroyers to rescue any downed air crew. Then, at 1212hrs he gave the order to head back out to sea. This time they went south around Simeulue, but by 1530 they were clear of Sumatra's chain of offshore islands and entered the open ocean.

At 1650hrs, though, a group of Japanese Ki-46 'Dinah' reconnaissance aircraft were spotted, shadowing them from the south. They though, were driven off by the fighters of the task force CAP. Soon after dawn on Friday morning they were joined by RFA *Wave King*, who refuelled the destroyers again, as well as the cruisers. The rest of the return voyage was uneventful, and Vian's TF 65 finally reached Trincomalee early on 7 January, after six days at sea. Vian's report to Admiral Fraser began by demonstrating that

Operation *Lentil* had been a qualified success. It appeared later that oil production at the Pangkalan Brandan refinery had been reduced by at least a third thanks to the damaged facilities there. Vian though had hoped for more. He had criticisms, however, many of which mirrored those made by Moody after previous operations. These, though, would all be addressed within days of the return to port.

## Plans and transfers

Fraser and Vian were keen to continue the air campaign, but it was now early January, and Fraser also wanted his fleet to play a more active part in the war. So while the next operation was being planned, he was also laying the groundwork for a change of base. This involved moving his fleet almost 5,000 miles to the east, from Ceylon to Australia. While Trincomalee was a long-established and extremely well-equipped naval base, it was too far from the Central Pacific, where Fraser planned to operate in support of the US Navy. Back in Washington, Admiral Somerville was already preparing for this, persuading the US Navy's Admiral King that it was the next logical step for the British Pacific Fleet. This was a long and tricky process though.

Both the American government and the US Navy had political reservations in working alongside the British in the closing stages of the War in the Pacific.

Eventually, Admiral Fraser flew to Hawaii for a series of face-to-face meetings with Admiral Nimitz, overall commander of all US Naval forces in the Pacific theatre. One suggestion was that the British Pacific Fleet would support General MacArthur in the reconquest of the Philippines, and 'mopping up' operations in South East Asia, including the East Indies. Prime Minister Churchill, though, remained steadfast in his demands that Fraser's fleet were fully involved in the final drive on Japan. Admiral Nimitz agreed, and expressed his desire that Fraser's BPF be where he needed it most – operating alongside the US Navy during the planned spring offensive in the Central Pacific. However, he was unable to rule out the possible diversion of the fleet to MacArthur's command, if his wishes were overruled by Admiral King, or by the White House.

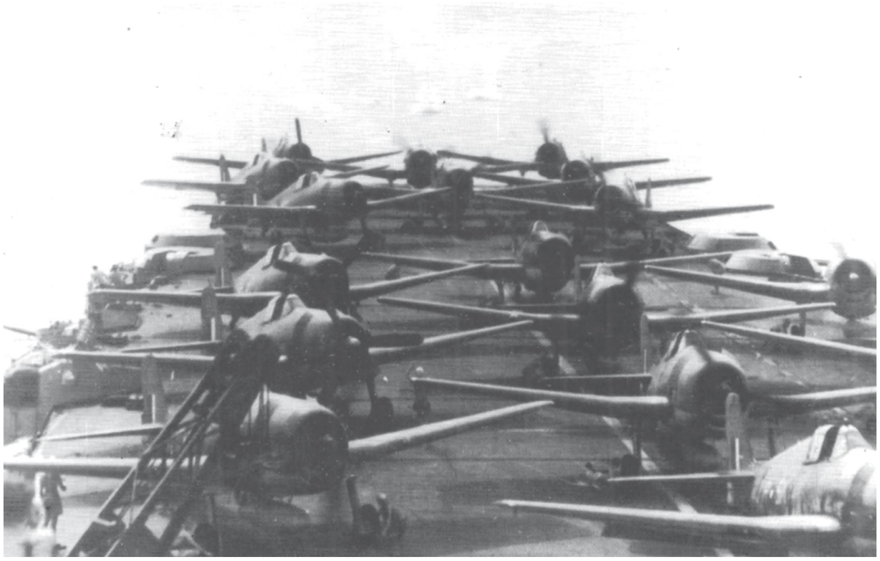
Nimitz also expressed reservations about the combat readiness of the British fleet. However, he was aware that the British Eastern Fleet had adopted American methods, and that its aircraft carriers were for the most part equipped with American-built planes. Fraser assured him that after several months of preparation, the British Pacific Fleet was ready to play its part. After a series of successful operations, which had become increasingly ambitious, the fleet's carrier strike force had commenced Operation *Outflank* – a series of fully-fledged air operations in Sumatra. The first of these, Operation *Robson*, had seen the British carriers penetrate into the Malacca Strait, and launch air strikes against oil installations in the north-east of the island. More were planned in January, before the fleet began its change of base from Trincomalee in Ceylon to Sydney in Australia.

Although the British Pacific Fleet was never attacked by kamikaze aircraft during the Sumatran campaign, this remained a serious threat to the task force during Operation *Outflank* – the string of three fully-fledged air assaults on Sumatran refineries. This shows the aftermath of a strike on *Victorious* the following May, while operating off Okinawa.

This was sufficient for Admiral Nimitz, who promised Fraser that he would officially request that the BPF join him in joint operations. The fleet might have been the largest carrier force the Royal Navy had ever assembled, but it was still dwarfed by its American counterparts. So, in the Central Pacific, the British Pacific Fleet would be a relatively small but distinct element within a larger Allied armada. Before Fraser rejoined his fleet, though, he took his own look at its future area of operations. On 6 January 1945 he was aboard the battleship USS *New Mexico* in Lingayen Gulf, off the north-western coast of Luzon in the Philippines, watching the commencement of a major amphibious landing there. The fleet came under intense attack from Japanese kamikaze planes, and one of them struck the bridge of the battleship. Over a hundred of her crew were killed, as well as one of the group of British observers, Lieutenant General Herbert Lumsden. Admiral Fraser, who was on the opposite side of the bridge when the kamikaze struck, survived unscathed.

During his absence, plans for the move of fleet base continued apace. The reason for this move of fleet base was clear. Although Sydney in New South Wales was still a long way – over 3,000 miles – from the main naval theatre of the Central Pacific, this was still closer than Trincomalee. It also didn't involve running the gauntlet of Japanese attacks from the Dutch East Indies. It began on 2 December, when Fraser's flagship, the battleship *Howe*, departed from Trincomalee, bound for Sydney by way of Fremantle. She was accompanied by four destroyers (*Quilliam*, *Quality*, *Quadrant* and HMAS *Quiberon*). On his return from the Central Pacific, Admiral Fraser would establish his headquarters ashore in Sydney. His administrative team, led by Vice Admiral Charles Daniel, also transferred from Trincomalee to a shore base in Melbourne, HMS *Beaconsfield*.

Similarly Rear Admiral Reginald Portal was also established ashore in HMS *Golden Hind* in Sydney, as Flag Officer, Naval Air Stations. His task was to provide the carrier group's embarked squadrons with airfields in Australia, where they could refit and repair their aircraft. The other key logistical figure in the British Pacific Fleet was the Rear Admiral in charge of the Fleet Train – the fleet's rapidly growing collection of support vessels, from ferry carriers and supply ships to tankers, maintenance ships and hospital ships. Rear Admiral Douglas Fisher, though, would eventually be based aboard HMS *Montclare*, a former ocean liner, which had been converted into a destroyer depot ship. Until her arrival in Sydney that spring though, he was based ashore in Melbourne. So, with the departure of the fleet flagship, and the transfer of the fleet's support staff, all that remained in Trincomalee was the operational fleet itself, and whatever fleet train vessels it required.



Grumman Hellcat fighters of 1839 and 1844 NAS ranged on the after flight deck of HMS *Indomitable*. During the Sumatran air campaign she was the only carrier in the fleet to carry this fighter, apart from a photo-reconnaissance flight of Hellcats embarked in HMS *Indefatigable*. Together, *Indomitable*'s two Hellcat squadrons formed the 5th Naval Fighter Wing.

Of course, after their departure Ceylon would remain the base of Admiral Sir Arthur Power's East Indies Fleet, created on 22 November, at the same time as the British Pacific Fleet was established. He was based ashore in Colombo, while his Flag Officer (Air), Rear Admiral Moody, set up his headquarters at Colombo Racecourse, which was duly renamed HMS *Bherunda*. This fleet would soon become heavily involved in the support of military operations in Burma.

On 15 January, Admiral Sir Bruce Fraser arrived in Sydney, fresh from the Lingayen Gulf operation, and his meeting with Commander-in-Chief of the United States Navy Admiral Ernest King. This established the basis for future cooperation between the British and American fleets. His equally important series of meetings in Pearl Harbor with Admiral Chester Nimitz had examined the details of this. It also led to the establishment of an advanced base for the British Pacific Fleet at Manus Island in the Admiralty Islands, almost 2,000 miles to the north of Sydney, on the northern edge of the Bismarck Sea, some 150 miles off the coast of New Guinea. On 19 January the advanced elements of the British Pacific Fleet arrived there: the battleship *Howe*, the light cruiser *Swiftsure*, and three destroyers (*Quilliam*, *Quadrant* and *Quality*).

The remainder of the British Pacific Fleet were scheduled to leave Trincomalee for the last time in late January. As they did they had one last operation to launch from the base. During Fraser's meeting with Admiral Nimitz in Pearl Harbor, the American commander had requested that the BPF conclude their Sumatran campaign with one final large-scale air strike. This time, the target would be Palembang in south-eastern Sumatra. It was estimated that round 75% of the aircraft fuel used by the Japanese air force came from there. So, a final devastating air strike by the British Pacific Fleet on those strategically vital oil facilities would have a major impact on the War in the Pacific. Naturally, Admiral Fraser was more than happy to agree to Nimitz's request.

## Palembang

As Admiral Nimitz pointed out during the Pearl Harbor meeting, Palembang had already been targeted by heavy bombers of the US Army Air Force. Their bombing of the facilities there had achieved little, So, Nimitz hoped that a precision strike by carrier-based aircraft would prove more effective. For Fraser, this was a chance to show the American he'd soon be working with, that his carrier strike force was now a thoroughly professional force. So, plans were immediately developed for what would be the third part of the Operation *Outflank* series of air operations – and both the largest, longest and most complex. It would also be carried out by the main elements of the BPF as they began their long journey from Trincomalee to Sydney. For his part, Rear Admiral Vian was equally keen to finish the task in hand – the reduction of Japanese oil production in Sumatra.

This task, carried out by Operation *Outflank*, was both a strategically important mission, and one which Vian's strike force was now more than capable of achieving. So, while Admiral Fraser began the planning of the fleet's future operations in the Central Pacific, Vian and his staff were left to develop plans for their final series of strikes in the Sumatran air campaign which had begun the previous April, with that first attack on Sabang. Like Fraser, Vian was equally determined to prove that the British carrier strike force had come a long way in those intervening nine months. This final move in the Sumatran air campaign, the attack on Palembang, was to be codenamed Operation *Meridian*.

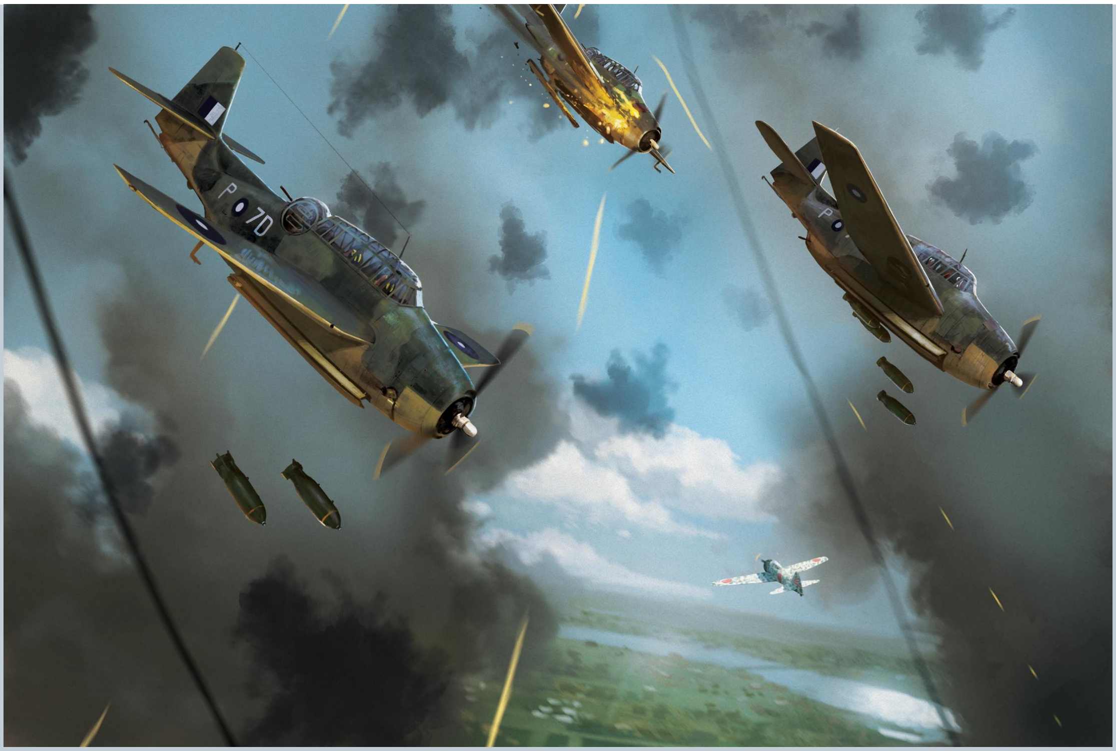
For the first time, Vian's carrier strike force consisted of four carriers: *Illustrious*, *Indefatigable*, *Indomitable* and *Victorious*. As a result, the two carefully planned and meticulously orchestrated attacks would be the largest ever mounted by the Fleet Air Arm so far in the war, and the largest ever against a single target. The city of Palembang in south Sumatra lay astride the River Musi, which flowed east into the Selat Bangka, a channel of the Java Sea, just over 50 miles downriver. As well as being a major centre for oil production, it was also a major road and rail hub, and the main headquarters of Japan's military garrison in Sumatra. The main targets of the strike, though, weren't the city itself, but two large oil refineries five miles downstream. There, the smaller River Komerine merged with the Musi on its southern side.

Adjacent to the mouth of the Komerine, on its western bank, was the Pladjoe refinery, the largest one in the whole of the Far East. It had been established by the Royal Dutch Shell company during the inter-war years, and had been taken over by the Japanese in February 1942. This vast, sprawling refinery site was the operation's primary target. On the eastern bank of the Komerine was the Songei Gerong oil refinery, built during the 1930s by Standard Oil, an American company based in Cleveland, Ohio. It too had been taken over by the Japanese, and was one of the largest refineries in the East Indies, second only to its neighbour. This would be another major target, only Pladjoe being of greater importance. Between them, they refined over 3 million tons of oil per annum. They also produced three-quarters of the aviation fuel used by the Japanese. So if these two refineries could be put out of business, then the attack would have a major impact on the ability of the Japanese to continue fighting.

## Operation *Meridian I*: strike on Pladjoe Refinery, Palembang, 24 January 1945

The climax of the Sumatran air offensive was Operation *Meridian*, the two air strikes on the key oil refineries at Palembang in southern Sumatra. This involved aircraft from four carriers, and two separate operations codenamed *Meridian I* and *Meridian II*, launched against the adjacent oil refineries at Pladjoe (Plaju) and Songei Gerong (Sungeigerong), on the southern side of the Musi River from the city of Palembang. This shows the first of these strikes, *Meridian I*, which was carried out on 24 January 1945. While fighters conducted ‘Ramrod’ attacks on Japanese airfields in the area, the main strike of Avenger dive bombers attacked Pladjoe refinery, escorted by Corsairs and Hellcat fighters.

As the Avengers began their initial shallow dive towards their target, which they approached from the south, they saw barrage balloons rise to screen the refinery. The airmen had no option but to continue their attack, passing between the cables tethering the balloons to the ground. The attack was made in two waves, and each individual squadron made their final approach from slightly different directions. This shows the Avengers of 857 NAS from *Indomitable* making their final bombing run, passing through the wires to release their bombs over the target from a height of around 3,500ft. The other squadrons followed close behind them. The squadron was subjected to heavy anti-aircraft fire as it made its attack, and one of the Avengers was hit and shot down. Waiting for the Avengers beyond the target were a cluster of Japanese Ki-45 fighters, one of which can be seen circling in the distance. During the attack the squadron scored several direct hits on their targets, including the pumping station and several oil tanks.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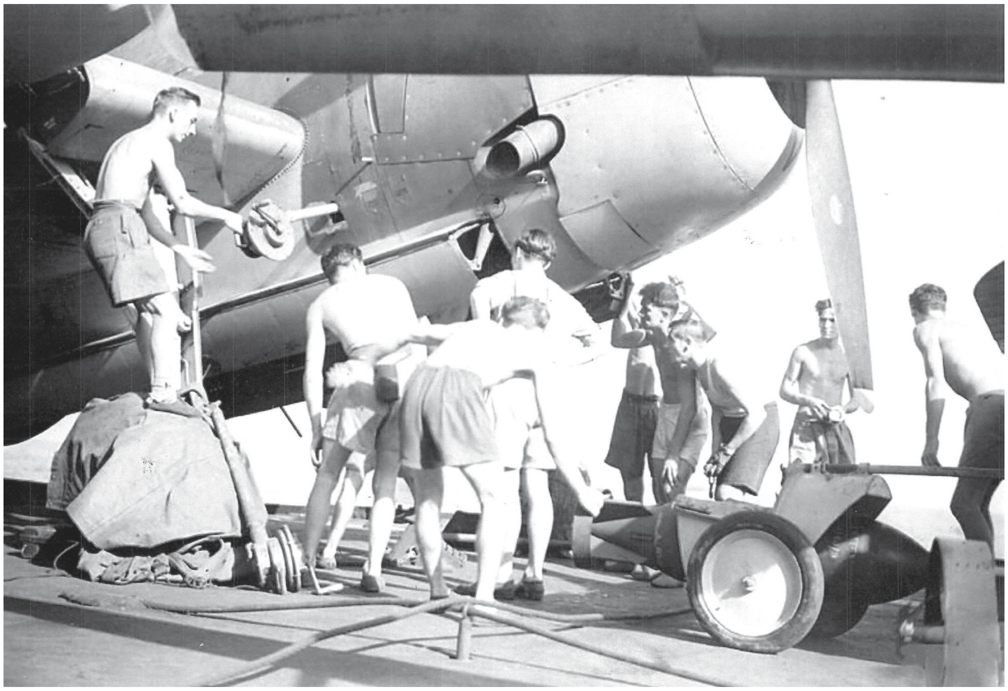
Sub Lieutenant John Haberfield RNZNVR, a Hellcat pilot from 1839 NAS, embarked in *Indomitable*. He was shot down near Palembang during Operation *Meridian I*, and captured by the Japanese. He was later executed by them shortly before the end of the war.

In Trincomalee, former employees of the two oil companies helped Vian by supervising the building of a large model of the oil refineries. This was used by the Fleet Air Arm to brief their air crews before the operation. The aim was to give them an intimate knowledge of their objective, so they knew exactly which places within these two sprawling complexes presented the most effective targets for their bombs. This, more than anything else, was to have a major impact on the accuracy of what followed. Of course the Japanese were well aware of the importance of the Palembang refineries, and so they were heavily defended, so, extensive anti-aircraft defences were in place around the city.

There were also several Japanese airfields scattered across southern Sumatra, with two around Palembang, and four more between the city and Sumatra's Indian Ocean coast, 160 miles to the south-west. The neutralizing of these would have to form part of Vian's operational plan. If the Japanese had forewarning of the attack, these local squadrons could be reinforced by more aircraft drawn from elsewhere in the Dutch East Indies, as well as Singapore and Malaya. In previous operations, no Japanese reconnaissance flights had been encountered over the Indian Ocean, although they had enough available aircraft. This, though, was something that Vian felt could be dealt with by the CAP screen of the carrier task force, if the situation arose.

Operation *Meridian* was divided into two parts. *Meridian I*, scheduled for 22 January, would involve a major attack on the Pladjoe oil refinery. It was hoped that this would take the defenders by surprise, and the attack would be carried out before the Japanese air defences in the area could react. *Meridian II* would take place several days later, and would involve a similar attack on the Songei Gerong oil refinery. This though, was expected to be more problematic, as the Japanese would be fully alerted, and so both their air defences and anti-aircraft sites would be ready and waiting for them. So, for both air strikes detailed planning was of paramount importance. Only through a high degree of accuracy in timing, coordination of air formations and the precision of bombing strikes could the results the Allied commanders wanted be achieved. To help with this, Vian appointed an Air Coordinator for the two operations. Major Ronald Hay of the Royal Marines commanded the 47 Fighter Wing embarked in *Victorious*. The 25-year-old Scotsman had been seconded to the Fleet Air Arm at the start of the war, and had shown exceptional qualities of leaderships and organization. He was the perfect man for the job.



The refuelling and arming of a Grumman Avenger of 854 NAS on the flight deck of *Illustrious* before Operation *Meridian I* – the attack on the Pladjoe oil refinery at Palembang on 24 January 1945. Each of the squadron's Avengers carried four 500lb bombs during this strike, which had to be dropped with pinpoint accuracy.

## Operation *Meridian I*

The plan devised by Hay and approved by Vian called for a total of 48 strike aircraft, with 12 drawn from each of the four available aircraft carriers. Each Avenger would carry a payload of four 500lb MC (Medium Capacity) bombs – a total of 192 bombs. While most of these would be fused normally, ten of them would have delay fuses fitted, which would detonate at a set time after arming, ranging from one hour to 48 hours. This was designed to prevent the Japanese from effectively repairing the damage to the refinery. Although more Avengers were available on board the carriers, it was decided that this was the optimum number that could be ranged on the carriers' flight decks and launched without incurring delays in forming up. Given the relatively long range from launch-off point to the target – around 200 miles – this was meant to ensure that as little time as possible was wasted before sending the strike on its way.

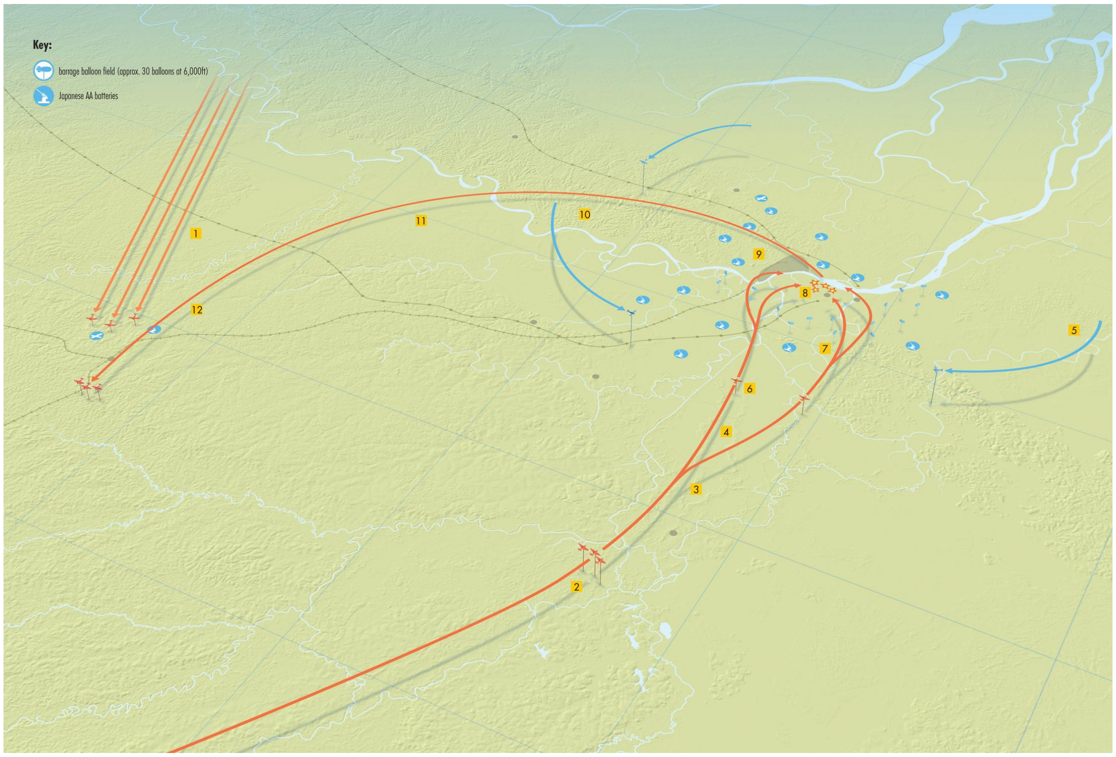
These 48 Avengers were divided into two wings, each made up of two squadrons. 1 Wing was made up of 12 Avengers from *Victorious* (849 NAS) and *Indomitable* (857 NAS), while 2 Wing comprised 12 more from

*Indefatigable* (820 NAS) and *Illustrious* (854 NAS). While all of the bomber crews would be fully briefed, they would be accompanied by Major Hay during the raid, flying a Corsair from *Victorious*'s 47 Fighter Wing. In fact, Hay himself would be accompanied by three other Corsairs of his flight, and so these would both form part of the strike's escort screen, as well as ensuring that the Air Coordinator would be able to direct the bombing runs of the two strike wings from a point directly over the target. This was essentially another US Navy innovation, which the Royal Navy had taken some time to adopt. This was its first real trial in a major Fleet Air Arm operation. This coordination had been practised over Ceylon, as had the forming up of both air strikes and escorts, but Operation *Meridian I* was a chance to put this training into effect.

## Operation *Meridian*, 24 January 1945

## The air strike on Pladjoe Refinery, Palembang

The climax of the Royal Navy's air offensive over Sumatra was Operation *Meridian*. The two oil refineries at Palembang in southern Sumatra were the largest and most productive in South East Asia, so damaging them would have a major impact on Japan's ability to fight. This was the largest Fleet Air Arm attack yet, involving four aircraft carriers and 128 aircraft. It was a complex operation, with fighter sweeps of Japanese airfields, fighter protection over the task force, rocket attacks on ground defences and then the main strike itself. There were two parts to *Meridian*, each a separate attack on a refinery. The first of these was the bombing of Pladjoe oil refinery, which was heavily-defended. This though, would be the most successful air strike of the whole campaign.


Key:
barrage balloon field (approx. 30 balloons at 6,000ft)
Japanese AA batteries
1
2
3
4
5
6
7
8
9
10
11
12

**Task Force 63** (Rear Admiral Vian)
*Indomitable* (flag):
1839 NAS (10 Hellcat fighters)
1844 NAS (10 Hellcat fighters)
857 NAS (16 Avenger dive bombers)
*Indefatigable*:
887 NAS (12 Seafire fighters)
894 NAS (12 Seafire fighters)
1770 NAS (12 Fairey Firefly fighters)
820 NAS (12 Avenger dive bombers)
*Illustrious*:
1830 NAS (12 Corsair fighters)
1833 NAS (14 Corsair fighters)
854 NAS (12 Avenger dive bombers)
*Victorious*:
1834 NAS (14 Corsair fighters)
1836 NAS (16 Corsair fighters)
849 NAS (12 Avenger dive bombers)

Escort: 1 battleship (*King George V*); 4 cruisers (*Argonaut*, *Black Prince*, *Ceylon*, *Euryalus*) and 10 destroyers.

## EVENTS

**1.** 0800hrs: The ‘Ramrod’ strike by three groups of fighters strafes Lembak airfield. Heavy AA fire is encountered, and one Corsair is shot down. Only one Japanese fighter is destroyed on the ground as the airfield is virtually devoid of aircraft. This suggests that enemy fighters are already airborne.

**2.** At the same time the main strike approaches its target and notices barrage balloons being raised around the refinery.

**3.** 0803hrs: The strike splits into two wings – 1 Wing (849 and 857 NAS) and 2 Wing (820 and 854 NAS), with 1 Wing to port of 2 Wing. Each attacks in echelon, with 2 Wing making its bombing run after 1 Wing. The dive bombers begin their descent from 12,000 to 8,000ft.

**4.** 0806hrs: Fireflies of 1770 NAS range ahead to attack selected ground defence targets to the south of Pladjoe refinery. They note that around 30 barrage balloons have been raised to around 6,000ft. Their rocket attack achieves very little, apart from suppressing some AA fire.

**5.** 0808hrs: Japanese fighters are sighted approaching the strike formation from either side. Top cover and mid cover fighters detach themselves to intercept them (Ki-43 ‘Oscar’ and Ki-44 ‘Tojo’ fighters). A furious dogfight ensues, until around 0825hrs.

**6.** 0808hrs: Enemy AA defences lay down a heavy flak barrage with bursts as high as 15,000ft. By this stage, the two wings have separated into squadron formations and will approach the target from a slightly different angle. Each attack is timed to take place a minute apart.

**7.** 0810hrs: The Avengers of the main strike begin their final approach, dropping rapidly from 8,000 to around 3,500ft, passing through the cables of the barrage balloons. Amazingly, no Avengers strike the cables, although one aircraft is shot down.

**8.** 0814hrs: The leading Avenger squadron, 857 NAS, bombs the Pladjoe refinery from 3,500ft. Several key installations are hit, but the ensuing black smoke partly obscures the target for the succeeding waves. This is followed by attacks from 849 NAS, 820 NAS, and 854 NAS at 0818hrs leaving a plume of smoke 10,000ft high over the burning refinery.

**9.** The Avengers follow the line of the Musi River towards the west. However, this brings them within range of a cluster of AA guns around Palembang city, and they are simultaneously attacked by a large group of Ki-44 fighters, interspersed with Ki-43 'Oscars'. Two Avengers are shot down, plus four Japanese fighters as the withdrawing strike aircraft recross the river at 1,500 to 3,000ft.

**10.** At 0822hrs the strike aircraft cross the Musi River, and bank pass close to Lembak airfield, where they cross the railway line which is visible from the air. They begin climbing to 6,000ft, while still fighting off Japanese fighters.

**11.** 0825hrs: Remaining Japanese fighters break off the action and turn away towards Palembang.

**12.** 0832hrs: The majority of the escort fighters rejoin the strike, forming a cordon around the Avengers. Landing-on begins at 0932hrs, despite further losses as damaged aircraft have to be ditched beside the task force.

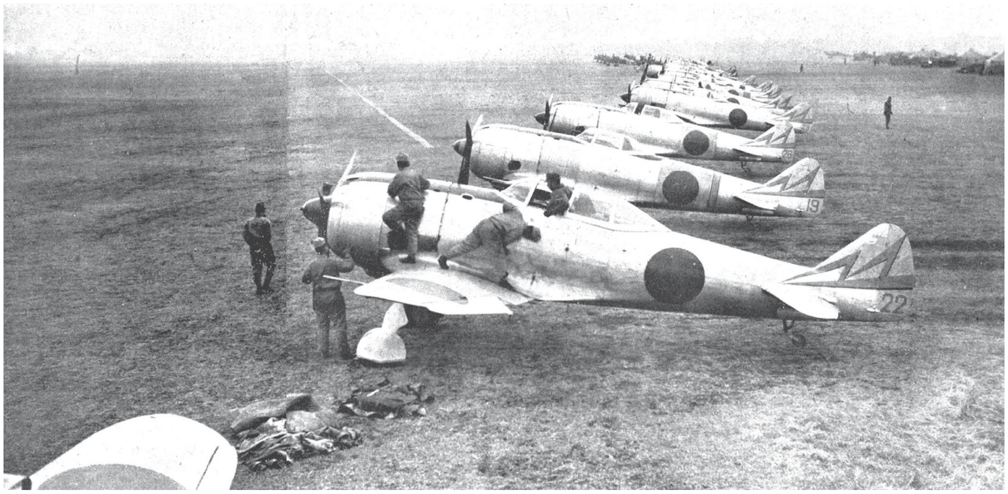
The battleship HMS *King George V*, namesake of her class, entered service with the Home Fleet in late 1940, and as fleet flagship she participated in the sinking of the German battleship *Bismarck*. In December 1944 *King George V* arrived in Ceylon, in time to take part in Operation *Meridian*. On 29 January her crew was credited with shooting down a Japanese Ki-21 ‘Sally’ bomber, during an attack on the task force off the Sumatran coast.

The Avengers would have a substantial escort of fighters, 16 Hellcats and 28 Corsairs, supported by 12 Fireflies of *Indefatigable*’s 1770 Squadron. During Operation *Lentil*, these had used rockets to suppress anti-aircraft defences shortly before the main bombing attack. They would do the same again in this operation, although en route to Palembang, they would form the ‘Bow Cover’ element of the bombers’ fighter screen. The Corsairs would take up position on either side of the bombers, while the Hellcats would follow astern of them, and provide Top Cover, flying 3,000ft above the main strike. Major Hay placed a particular emphasis on maintaining this formation until the final bombing run. Just as before, the Fireflies would peel off, and carry out their rocket strikes 40 seconds before the Avengers reached their target. The aim was to reduce distraction from anti-aircraft fire during these vital final moments of the attack.

With the plan in place, Vian gave the order to proceed to sea. Designated Task Force 63, his command was built around his carrier strike group of four fleet carriers (*Illustrious*, *Indefatigable*, *Indomitable* and *Victorious*), accompanied by the battleship *King George V*, three AA cruisers, a light cruiser and nine destroyers. A tenth destroyer would join them once they had put to sea. Rear Admiral Vian flew his flag in *Indomitable*, and officially he would have overall control of the operation once they'd reached their flying-off point. Until then, in theory, operational control of the task force was held by Vice Admiral Rawlings, who flew his flag in *King George V*. However, as this was primarily an air operation, Rawlings sensibly ceded command to Vian until the completion of both phases of Operation *Meridian*. After that, he would resume command.

| **Operation *Meridian I*, 24 January 1945 48 strike aircraft, 56 escorts, 24 sweep fighters (128 aircraft)** | |
|---|---|
| The 'Ramrod' Force | 12 Vought F4U Corsair fighters (1830 NAS/15 NFW *Illustrious*)<br>12 Vought F4U Corsair fighters (1836 NAS/47 NFW *Victorious*)<br>4 Grumman F6F-3 Hellcat fighters (1839 NAS/5 NFW – *Indomitable*)<br>4 Grumman Avenger TBFs (857 NAS – *Indomitable*) |
| Air Defence Sweep Force | 12 Fairey Firefly fighters (1770 NAS – *Indefatigable*)<br>(Also formed part of the strike escort) |
| The Main Strike Force | |
| Escorts | 16 Grumman F6F-3 Hellcat fighters (1839 NAS, 1844 NAS/5 NFW – *Indomitable*)<br>14 Vought F4U Corsair fighters (1833 NAS/15 NFW – *Illustrious*)<br>14 Vought F4U Corsair fighters (1843 NAS/47 NFW *Victorious*)<br>4 Vought F4U Corsair fighters<br>Air Coordinator's flight (1836 NAS/47 NFW – *Victorious*) |
| Strike Aircraft | 1 Wing<br>12 Grumman Avenger TBFs (849 NAS – *Victorious*)<br>12 Grumman Avenger TBFs (857 NAS – *Indomitable*)<br>2 Wing<br>12 Grumman Avenger TBFs (820 NAS – *Indefatigable*)<br>12 Grumman Avenger TBFs (854 NAS – *Illustrious*) |

During the voyage from Ceylon to the Sumatran coast, the task force would be refuelled at sea by Force 69, made up of three RFA tankers. This was another area which the Royal Navy had improved during the past few months. Now, refuelling operations while underway, while a little less slick than those of the US Navy who were a lot more practised in these techniques, had at least reached an acceptable standard. At 1430hrs on 16 January 1945 the warships of the Task Force left Trincomalee for the last time. This distinctly understated departure in the rain and under grey overcast skies was a bitter-sweet moment for the men of the task force. This was their farewell to a fleet base which had seen them evolve during the past year. Now, they were heading to a new base, on the far side of Australia, with all the excitement and novelty that might bring. They were also, after this last key operation, about to embark on a whole new phase of their war, exchanging the waters of the Indian Ocean for those of the Pacific.


The Japanese Ki-44 *Shoki* ('devil vanquisher') or 'Army Type 2' fighter, codenamed 'Tojo' by the Allies. This was primarily a very fast interceptor, and in the dogfighting which took place over Palembang during Operation *Meridian* they proved less manoeuvrable than the Fleet Air Arm's own fighters.

The underway replenishment group, Force 69, had already left Trincomalee three days before, to allow this slower-moving force, escorted by a single destroyer, to take up station at their refuelling rendezvous, midway across the Indian Ocean. On 20 January the two groups made contact with each other, and this refuelling at sea was carried out successfully, despite the lumpy seas. At this stage, though, the carriers didn't need to refuel, although all the other ships in the force did. At this point the escort for Force 69 was bolstered by the light cruiser *Ceylon*, which Vice Admiral Rawlings detached from his own force. It would accompany the replenishment group as it followed the Task Force towards the Sumatran coast. Then, reinforced by a fourth RFA tanker sent from the Australian naval base at Fremantle, it would replenish the task force again.

During the passage from Ceylon to Sumatra, TF 63 conducted a series of exercises, including the interception of enemy aircraft by the CAP screen, the driving off of reconnaissance planes and anti-aircraft defence, with Seafires from *Indefatigable* standing in for the enemy. When they reached the flying-off position, it would be these Seafires of 24 Naval Fighter Wing which would provide the CAP protection for the task force. They lacked the range of the larger American fighters, but they were well-suited to the task of intercepting air attacks on the carriers, and breaking up enemy attacks. Nevertheless, the weather continued to be a problem, and during these exercises three Seafires crashed while landing on the deck of *Indefatigable*, due to the heavy movement of the carrier.

## Operation *Meridian* – Naval Order of Battle

**Task Force 63 Rear Admiral Sir Philip Vian**
**Task Group 63.1 Rear Admiral Sir Philip Vian**
**Carrier Strike Force** (1st Aircraft Carrier Squadron)

| | |
|---|---|
| HMS *Indomitable* (Task Force flagship) | (Indomitable-class fleet aircraft carrier) |
| HMS *Indefatigable* | (Implacable-class fleet aircraft carrier) |
| HMS *Illustrious* | (Illustrious-class fleet aircraft carrier) |
| HMS *Victorious* | (Illustrious-class fleet aircraft carrier) |

**Escort Group** (25th Destroyer Flotilla) Captain Harold Henderson

| | |
|---|---|
| HMS *Grenville* (flotilla leader) | (U/V-class destroyer) |
| HMS *Undine* | (U/V-class destroyer) |
| HMS *Ursa* | (U/V-class destroyer) |
| HMS *Undaunted* | (U/V-class destroyer) |

**Task Group 63.2** Vice Admiral Henry Rawlings
**Surface Group**

| | |
|---|---|
| HMS *King George V* (Task Group flagship) | (King George V-class battleship) |
| HMS *Black Prince* | (Bellona-class AA cruiser) |
| HMS *Argonaut* | (Dido-class AA cruiser) |
| HMS *Euryalus* | (Dido-class AA cruiser) |
| HMS *Ceylon* | (Fiji-class light cruiser – attached to Force 69 on 20 January) |

**Escort Group** (27th Destroyer Flotilla) Captain Eric MacGregor

| | |
|---|---|
| HMS *Kempenfelt* (flotilla leader) | (W/Z-class destroyer) |
| HMS *Wakeful* | (W/Z-class destroyer) |
| HMS *Whirlwind* | (W/Z-class destroyer) |
| HMS *Wager* | (W/Z-class destroyer) |
| HMS *Whelp* | (W/Z-class destroyer) |
| HMS *Wessex* | (W/Z-class destroyer – joined the Task Group at sea on 19 January) |

**Force 69**

**Group 69.1** Underway Replenishment Group

| | |
|---|---|
| RFA *Arndale* | (Dale-class fleet tanker – joined the Force at sea on 23 January) |
| RFA *Echodale* | (Dale-class fleet tanker) |
| RFA *Empire Salvage* | (Fleet tanker – formerly Dutch MV *Papendrecht*) |
| RFA *Wave King* | (Wave-class fleet tanker) |

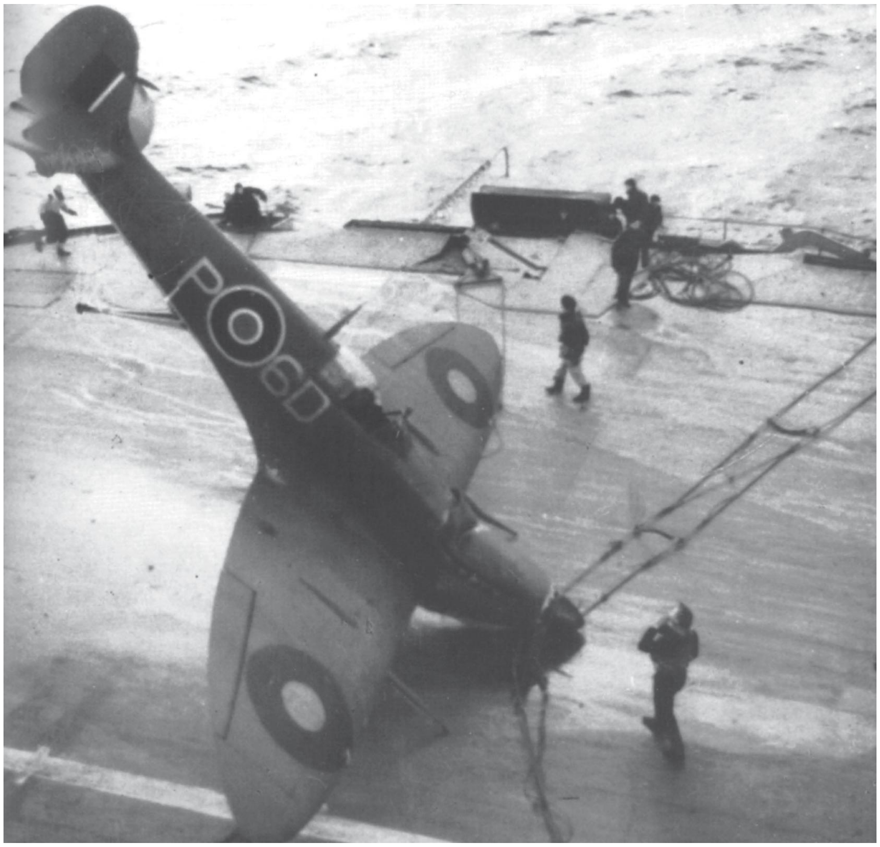
**Group 69.2** Escort Group Lieutenant Commander Archibald Harkness – until 20 January

| | |
|---|---|
| HMS *Urchin* | (U/V-class destroyer) |

Note: HMS *Ceylon* (Captain Guy Amery-Parkes) was attached to Force 69 on 20 January

**Submarine Air-Sea Rescue Assets**

| | |
|---|---|
| HMS *Tantalus* | (T-class submarine) |
| HMS *Tantivy* | (T-class submarine) |
| HMS *Sturdy* | (S-class submarine) |



Like its land-based forerunner the Spitfire, the Supermarine Seafire was a superbly manoeuvrable aircraft. However, it wasn't really rugged enough to cope with carrier operations, and accidents were fairly common. This one has been caught by the emergency wire barrier, after missing the arrester wires, and has ended up with a damaged propeller.

Vian's plan for Operation *Meridian I* called for the strike to be launched at dawn on Monday 22 January. However, as they continued on to the Sumatran coast they encountered increasingly poor weather, including heavy tropical rain squalls and Force 6 seas. The forecast for the following day also looked unpromising, so Vian decided to postpone the operation for two days. This was a risk, as due to the number of aircraft embarked many of them had to remain on the open deck. So, to reduce their exposure to the elements, for the next two days the carriers' deck handling crews rotated them between flight deck and hangar. This though probably accounted for the number of aircraft which suffered from mechanical problems during the operation.

By 0600hrs on Wednesday 24 January though, as dawn approached, the skies had cleared and the seas had moderated sufficiently for the operation to go ahead. During the previous day TF 63 had remained in a waiting area about 150 miles from the coast, to the south-east of the small Sumatran island of Engano. During the late evening of 23 January, though, they approached the coast, steaming towards the north-east, and passing 50 miles to the south of Engano at 0200hrs. They reached their launching-off point, codenamed 'TA' at 0615, and Vian gave the order to proceed with the launch. The carriers turned into the wind, a light breeze blowing from the south-east and the launch began. They were 30 miles off the coast, and 180 miles from their target at Palembang.

## The launch

The first aircraft to launch from the four carriers were the bulk of the escort aircraft for the air strike, Hellcats from *Indomitable* and 28 Corsairs from *Illustrious* and *Victorious*. The rest, the 12 Fireflies from *Indefatigable* and the four-Corsair flight from *Victorious* which included the Air Controller, would take off in a later group. The second range of aircraft to launch were the *Avengers*, which were duly brought on deck as soon as their escorting fighters were airborne. As they launched, each group of Avengers formed its own forming up group.

Two of the Avengers from *Indefatigable*'s 820 Squadron were damaged, though, in a flight-deck collision, and so were left behind, as was an Avenger from *Illustrious* which had mechanical problems. By 0640hrs, though, the remaining 45 bombers were airborne. At that point the strike leader, Lieutenant Commander William Stuart, in charge of *Indomitable*'s 857 Squadron began gathering the four groups together, into a single formation. Then, at 0704hrs, they headed off towards Palembang, while the escorting fighters slotted into position around and above them.

By then it was light enough to see the low mountains of southern Sumatra from the decks of the carriers. There was light cloud cover at around 20,000ft – too high to interfere with the flight towards the target. The strike aircraft crossed the coast by Pisang Island at 0702hrs, just north of the fishing village of Krui. The bombers and their escorts began climbing steadily to 12,000ft, to clear the tops of the range of mountains ahead. The highest one in the range, some 30 miles inland, was the 10,365ft-high Mount Dempo. Meanwhile, back aboard the carriers the next range of aircraft were now taking off. These consisted of the 24 Corsairs from *Illustrious*'s 15 NF Wing and *Victorious'* 47 NF Wing earmarked for the 'Ramrod' strafing sweep of the airfields between the coast and the bombers' target.

Taking off at the same time were all but one of the 12 Fireflies of *Indefatigable*'s 1770 Squadron, as well as the four-Corsair flight which included Major Hay, the Air Coordinator. One of the Fireflies had mechanical problems, and so was unable to join its companions. Two of them, though, also had to return due to engine problems, which reduced the size of the force to just nine Fireflies.

Inevitably, given the bad weather of the past few days, there were a few problems. One of the escorting Corsairs from *Victorious* had to return to the carrier with engine trouble, as did two of the carrier's 'Ramrod' Corsairs. However, to replace the missing strike escort, an additional Corsair from 1843 Squadron was flown off, and managed to catch up with the others shortly after they crossed the Barasi mountain range. Four Avengers also had to return to the carriers soon after they were launched, two from *Victorious*, one on each from *Indomitable* and *Indefatigable*. This reduced the strength of the strike force to 41 Avengers – 19 in 1 Wing and 22 in 2 Wing. This, though, wasn't really a serious enough loss to markedly reduce the operation's chance of success.

The Dido-class anti-aircraft cruiser HMS *Argonaut* accompanied the task force that launched Operation *Meridian*, and helped protect it during the lacklustre Japanese air strike against it on 29 January 1945, while recovering its strike aircraft. During that attack her radar-guided 5.25in guns proved invaluable in protecting the carriers.

It was still a long way to Palembang, and so to make sure the fighters had the range, they were fitted with drop tanks carrying extra fuel. These would be released during the return to the carriers. This also applied to the Fireflies, but they still managed to carry eight rockets each, just as they had during

Operation *Lentil*. These rockets were seen as crucial to supress the strong semi-circle of anti-aircraft weapons that were reportedly covering the southern side of the target. To bolster this firepower, their 20mm cannon were fitted with armour-piercing rounds. As the strike approached its target there was still no sign of enemy aircraft. The nine remaining Fireflies also caught up with the bombers and their escort, and took up the 'bow cover' position ahead of the Avengers shortly before they turned to make their final approach towards the target.

## The Ramrod

Meanwhile, the 22 remaining Corsairs of the 'Ramrod' sweep also headed towards their objectives. In addition there was a special 'Ramrod' force of eight aircraft from *Indomitable*, four Avengers of 857 Squadron and four Hellcats of 1839 Squadron. Their target was the airfield of Mana, on the coast, approximately 80 miles north of the task force. It was the closest Japanese airfield to the fleet, and so it was singled out for special attention. This small two-flight strike from *Indomitable* bombed and strafed the airfield at 0812hrs, destroying at least one reconnaissance aircraft on the runway there, and damaging or destroying several other aircraft. The Avengers also cratered the runway, destroyed a hangar and a control building, and effectively put the little airfield out of action. This small strike then returned to its carrier. This meant that the squadron of twin-engined Ki-46 'Dinah' reconnaissance planes based there would be unable to guide any retaliatory Japanese air strikes onto the British task force.

As for the other 'Ramrod' fighters, they operated in three large flights, designated Whippet 1, 2 and 3, each of up to eight fighters. The idea was that while two would take turns strafing an airfield, the third flight would fly 'top cover' overhead. Then, the three Whippet flights would rotate their roles for the next attack. Their first target was Lembak airfield, 40 miles south-east of Palembang. There the Japanese managed to shoot down a Corsair, killing the pilot, but reportedly around 18 Japanese fighters and reconnaissance aircraft were destroyed on the ground. Some of these were wrecked when the downed Corsair cartwheeled into them and blew up in a fireball, watched in horror by the other British fighter pilots. Then the 'Ramrod' force moved on towards Palembang.

The airfield there lay to the north of the city, and is now the site of Palembang's main airport. It was attacked at around 0820hrs, but the results were considerably less impressive than they had been at Lembak. By then the Japanese had been forewarned, and had had the time they needed to push any exposed aircraft on the aprons into nearby earthen revetments. Worse, all of the anti-aircraft positions around the airfield were now fully manned and ready, so the approaching 'Ramrod' fighters were met with a heavy fire as they swept in. Still, the attack was over in a minute, and while some fighters were slightly damaged, none of them had been shot down.

At the third site, Talengbetoetoe to the south-west of the city, another fighter was shot down as it approached the airfield. Then, two more Corsairs collided while carrying out strafing runs over the runway. While one fighter crashed into the ground, killing the pilot outright, the other only suffered damage to one wing, and managed to limp home, nursed towards the safety of the ocean by the pilot. The aircraft eventually ditched into the sea, next to a waiting destroyer – one of several which Vian had scattered between the task force and the coast, to reinforce the ASR submarines. As the 'Ramrod' aircraft moved on, they banked around towards the coast, and headed home, albeit in a now much-less-compact formation than before. They were now free to attack any targets of opportunity they came across. One of these was a freight train, attacked on the railway heading into Palembang from the south-west, and so directly over the 'Ramrod' flight path. The train engine was hit and derailed, as were the long line of trailers with oil tanks behind it. Disappointingly for the pilot from *Victorious*, these didn't explode as he swept over them.

Finally, another Corsair, this time from *Illustrious*, crashed into the jungle to the west of Palembang. It had either been hit by anti-aircraft fire as it flew over the northern side of the city, close to the Musi River, or else in a pass by one of the many Japanese fighters which were now in the area. The pilot tried to limp back to the carrier, but didn't make it. It was rumoured that, like some others, he had been taken prisoner, but he never survived it, and it was presumed he had been executed by his captors. However, the remaining 'Ramrod' fighters managed to return safely to their carriers, despite several of them suffering damage. Some of them, though, were deemed too badly damaged to land on, and so were ditched into the sea nearby. Others were deemed write-offs, and were pushed overboard after the operation.

Regardless of these unexpectedly high losses, the ‘Ramrod’ element of the operation was deemed a success, as a total of 34 Japanese aircraft had been reportedly destroyed on the ground. In addition, runways were put out of operation by wreckage, while adjacent airfield facilities – hangars, stores and control towers had all been damaged.

## The Pladjoe strike

Meanwhile, while this flamboyant ‘Ramrod’ operation had been running its course, the main part of the operation had already taken place. At 0803hrs the strike force reached its final waypoint 30 miles to the south of the Pladjoe refinery, and turned northwards to commence its bombing run, which meant a steady, low dive towards the target. As they approached, the pilots saw a large number of small barrage balloons being raised around the two refineries. Then, a minute later, at 0804hrs, a group of around a dozen or so Japanese Kawasaki Ki-45 Toryu ‘Nick’ fighters appeared from the western side of the city, just ahead and to the left of the British air formation. Some of these were flying above the bombers, at around 10,000 or 12,000ft. The fighter escorts on the ‘middle left’ side of the air strike peeled off to intercept them before the approaching fighters reached the bombers, and a large dogfight ensued.

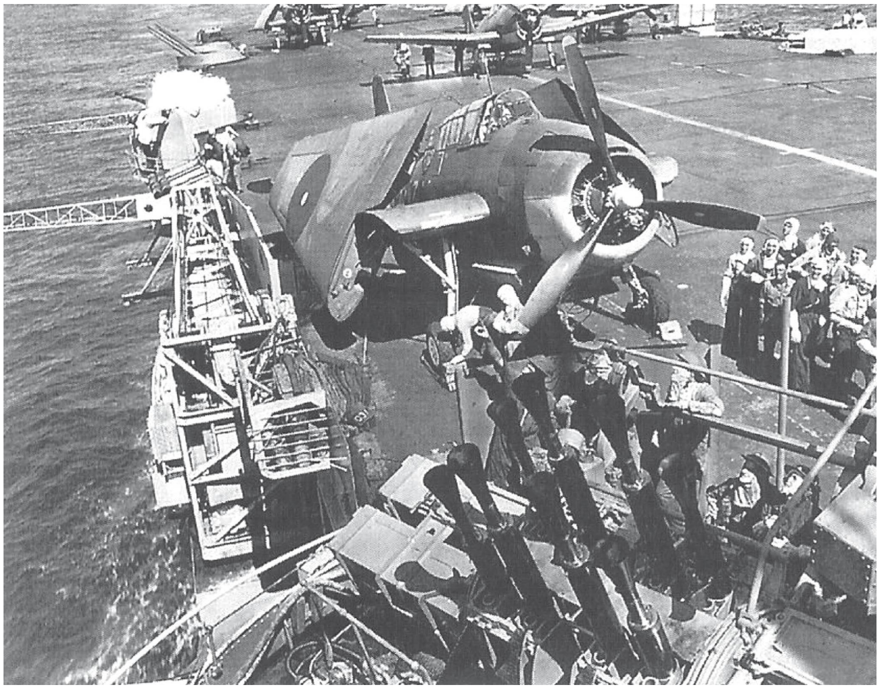
For the moment, though, the Avenger crews were more concerned by the large number of barrage balloons, which had been sent aloft as the aircraft approached their target. This was a wholly unexpected threat – one that hadn’t been known to the British before their plan of attack was devised. These balloons seemed to ascend surprisingly rapidly, and many quickly reached a height of between 4,000 and 6,000ft. That meant that the higher ones were roughly 3,000ft higher that the Avengers’ optimum bombing height, which was ideally between 4,000 and 2,000ft. If the bombs were released at a higher altitude then accuracy would be severely compromised. Much lower and the bombs wouldn’t have time to arm before they hit the ground. The Avenger pilots, and especially the strike leader and the four squadron leaders had only a handful of seconds – a minute at the most – to decide how to react to this alarming and wholly unexpected threat.

Even flying above the balloons wasn’t an attractive prospect for the dive-bomber crews, as many of them were still rising, and so there was a chance the bomber might still collide with one of them. To carry out their attack properly, there was only one real option. The British airmen would now have to fly beneath them, while descending slowly towards the sprawling oil refinery behind the screen of barrage balloons. This of course meant flying through a field of thick steel tethering cables, which some of the bomber crews later claimed was a singularly terrifying prospect. As one pilot said later, their Avenger might just survive a glancing blow with one of the cables, even if it sliced off a couple of feet of a wingtip. Any closer to the fuselage, though, and the wing would be torn off, leaving the Avenger and its crew to spiral into the ground.

At that moment the bombers were committed to their approach, descending slowly from around 12,000ft to 4,000ft. At that speed this forest of cables just ahead of them were all but invisible. Worse still, in a few moments the bomber crews would be fully committed to their bombing run. Then, they had to continue their flat dive without any deviation of direction or speed. The Pladjoe oil refinery was an extensive site covering several miles, and as one airman said afterwards, they could really take their pick of what to attack. In fact, the site contained several key installations. Destroying them required pinpoint accuracy, which in turn meant the attacking aircraft had to make their approach with great care. Any turn to avoid a cable would mean the target would be missed, and the bombs would be released on something much less vital. So, this called for both steady nerves and immense courage.

However, this new threat had been spotted by Major Hay, the Air Controller, whose Corsair was flying at around 20,000ft over the top of the bomber formation, several thousand feet above the ‘top cover’ fighters. He ordered the Fireflies which were in position ahead of the Avengers to race ahead, and to shoot as many of the balloons down as they could before the bombers reached them. The trouble was, the single radio frequency used by all of the air crews in the strike was now being increasingly filled by the chatter of the escort pilots, who’d been drawn into the sprawling dogfight to the left side of the bombers.

This meant that only a handful of Firefly pilots managed to hear Hay’s message, and follow his orders to attack the balloons. One or two of the balloons collapsed and fell, pierced by the fighters’ armour-piercing shells. As one pilot explained later though, all they really seemed to do with their shells was to pierce the balloon’s skin, and it then drifted to the ground very slowly, which still meant it was a hazard to the bombers, approaching in a steady glide just a few seconds behind the Fireflies.

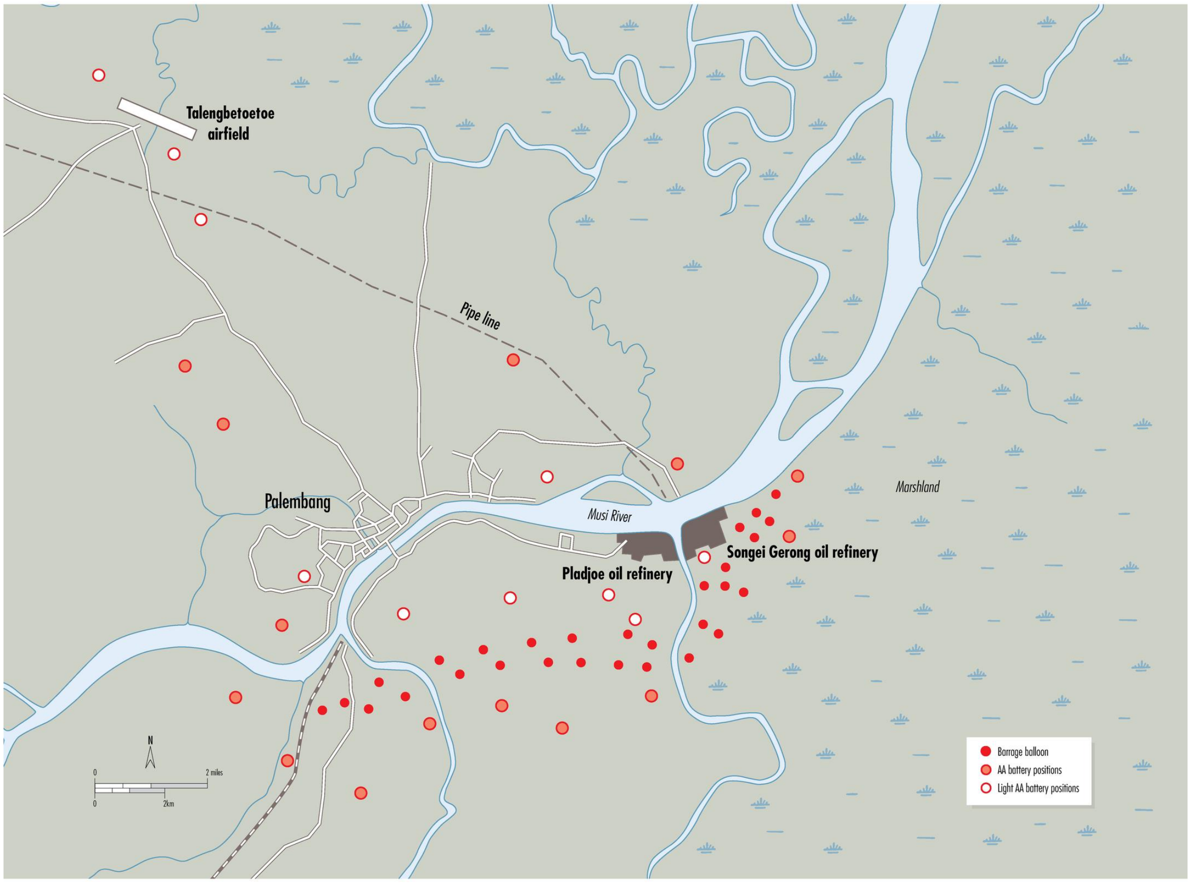


The deck crew of HMS *Indomitable* pose for the camera, together with the crew of a 2-pounder 'pom-pom' shortly before the start of Operation *Meridian* in late January 1945. Behind them is a Grumman Hellcat fighter, with its wings still folded.

Then, at 0808hrs a group of around 25 Japanese Nakajima Ki-44 Shoki 'Tojo' fighters appeared from the east, at a height of around 12,000 to 15,000ft. This put them above and to the right of the bombers. This time it was Hellcats of the top cover who moved to intercept them. All this, of course, was leaving the Avengers increasingly exposed. It seems that Pladjoe had three clear rings of defence. The first was the fighters, which appear to have been scrambled as the British strike aircraft first passed over the coast. This meant that the Japanese fighter pilots knew roughly the direction the attack was coming from, and gave them time to react accordingly. They had a little over half an hour to climb above the approaching strike, and to take up position to one side of the most likely path the strike would take to reach the two oil refineries. This forewarning also meant that the Japanese knew when the strike was due to reach Palembang, and so they knew when to unleash their screen of barrage balloons – the next line of defence.

At that point, at around 0809hrs, an extremely heavy barrage of anti-aircraft fire erupted from the ground. This was the final line of defence around the refineries, unleashed just as the strike was committed to its bombing approach. This was a mixture of fire from both heavy flak guns and lighter automatic weapons. The larger guns threw up a box barrage, designed to encourage the attackers to divert away from it. Instead the British pilots had no real option, and continued on their course. Then the lighter guns joined in, aiming to score direct hits on the bombers as they approached. The only consolation for the British airmen was that it seemed that while the enemy guns were skilfully ranged in, for some reason the gunners were firing on the wrong bearing, probably because they'd incorrectly gauged the speed of the approaching aircraft.

By now, though, the Avengers were fully committed. The other thing that might have saved them from more casualties was Major Hay's plan of attack. It called for the two Wings to separate, and to bank around the target to the north-east while still several miles from it. Then the two individual squadrons in each Wing would also separate, so that each squadron would carry out its own attack, roughly 40 seconds apart. Each had specific targets within the Pladjoe site, and this was an effective way to make sure they were all hit. Hay's plan called for the two waves to circle around to the east over the River Musi, and around the Songei Gerong refinery before making their final approach to the Pladjoe site. It had been calculated than if this was done 6 miles from the target, the bombers would be safe from anti-aircraft fire.


Talengbetoetoe airfield
Pipe line
Palembang
Musi River
Pladjoe oil refinery
Songei Gerong oil refinery
Marshland
N
0
2 miles
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2km
● Barrage balloon
● AA battery positions
○ Light AA battery positions

### COMPONENTS OF THE DIVE BOMB ATTACK ON PLADJOE OIL REFINERY, PALEMBANG – OPERATION *MERIDIAN I*, 24 JANUARY 1945

The target of Operation *Meridian I* was the oil refinery at Pladjoe outside Palembang, the largest oil-producing facility in the East Indies. The strike consisted of four squadrons, each made up of 12 Grumman Avenger dive bombers. Shortly after 0800hrs that morning, an hour after flying off from their carriers, the strike aircraft spotted their target, and began their approach. The strike was divided into two waves, each of two squadrons. Each wave would attack the target from a slightly different direction, as would the aircraft of its two squadrons. Each squadron-sized attack would take place a minute apart.

After flying at 12,000ft during the hour-long flight from the carriers, the Avengers then dropped to 8,000ft before beginning their final approach. The Avengers then descended at an angle of around 30° to 35°, until they reached their release point. By that stage they would be at around 3,500ft, with the aircraft's nose still pointing towards the 'Aim off Point'. Due to the forward momentum of the aircraft's four 500lb bombs, the release point was approximately a mile ahead of the target, to compensate for the weapons' trajectories. After the bombs were released the Avenger would climb out of its dive, and bank away to port, while it crossed the Musi River. It would then loop around until it had a well clear course back towards the carriers.

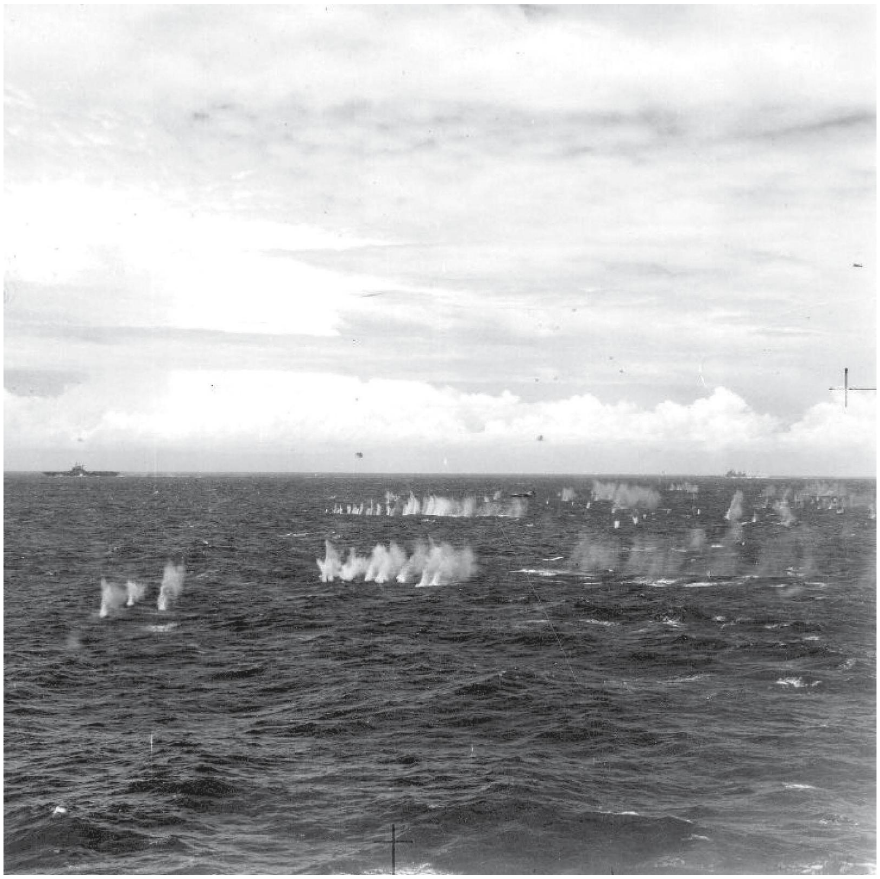
What complicated this during the two Palembang strikes (*Meridian I* and *Meridian II*) were the three layers of Japanese defences. First, a line of barrage balloons was sent aloft, to a height of 6,000ft. This meant that the Avengers had to pass between the thick steel mooring cables of the balloons as they made their dive towards the release point. As they were flying at around 160 knots, it was all but impossible to see the cables, while any last-second deviation from the dive-bombing run would mean the bombs would miss their target. To complicate matters, the Avengers were also being subjected to heavy anti-aircraft fire, first from heavy 75mm AA guns, and then, closer to the refinery, by a number of lighter 20mm automatic AA guns. There was little they could do about the Japanese fighters waiting for them beyond the Musi River. All the Avenger crews could do was hope that their own escorting fighters, flying above the barrage balloons, would be able to come to their aid. On the day, though, the attack went extremely well, despite a number of Avengers being lost to AA fire, Japanese fighters or through striking a balloon cable. The Pladjoe refinery was badly damaged, and oil production there was dramatically reduced for the remainder of the war.

This, though, wasn't the case at all. The AA defences proved more widespread than intelligence reports had suggested. As they made their turn towards the right of the target, 1 Wing was in the lead, with 2 Wing echeloned to starboard and slightly behind the leading wing. The basic idea was that 1 Wing would attack the target from the east-north-east and east, while 2 Wing would circle around a little further, to make its attacks from the east-south-east and south-east. So, at around 0812hrs the two elements of 1 Wing split up, and *Indomitable*'s 857 Squadron began their attack. One of these airmen later recalled the order from the squadron leader – 'Attack, Attack, Attack – Dive, Dive, Dive!' With that the squadron's Avengers began their final diving bombing run, dropping from 7,000ft down to 3,500ft as they went.

This of course meant plunging straight through the forest of cables ahead of them. Amazingly, although a couple of bombers suffered damage from glancing blows or ground fire, none of them were knocked out of the sky. Their primary target was the plant's pumping station, which Major Hay noted was hit at 0814hrs with commendable accuracy. Other secondary targets were bombed too, including several oil tanks, and within seconds a thick column of black smoke shot up from the refinery. Then they were through, and the squadron emerged over the river, before banking away to the left, over Palembang city. One of the squadron's bombers was hit, though, and was seen to crash near Palembang, on the north side of the river.

Then it was the turn of 849 Squadron – the Avengers from *Victorious*. After the attack, one of the pilots recalled how their dive bomber was buffeted by a huge explosion, a split second after they released their four bombs. The bombardier and gunner were both knocked unconscious, but the pilot was unaffected and was able to make his escape. Again, Hay noted a number of key targets were hit, including the plant's main power house and fuel distilling and filtration plants. Once they were clear 2 Wing moved in, led by Lieutenant Commander William Mainprice of 849 Squadron. The leading formation was 820 Squadron from *Indefatigable*, which dived as low as 2,500ft during its approach, although by now the thick choking smoke from the burning refinery made it hard to see targets, So, the bombardiers had to rely on their instincts, and their memory of the model of the plant they had studied so closely.

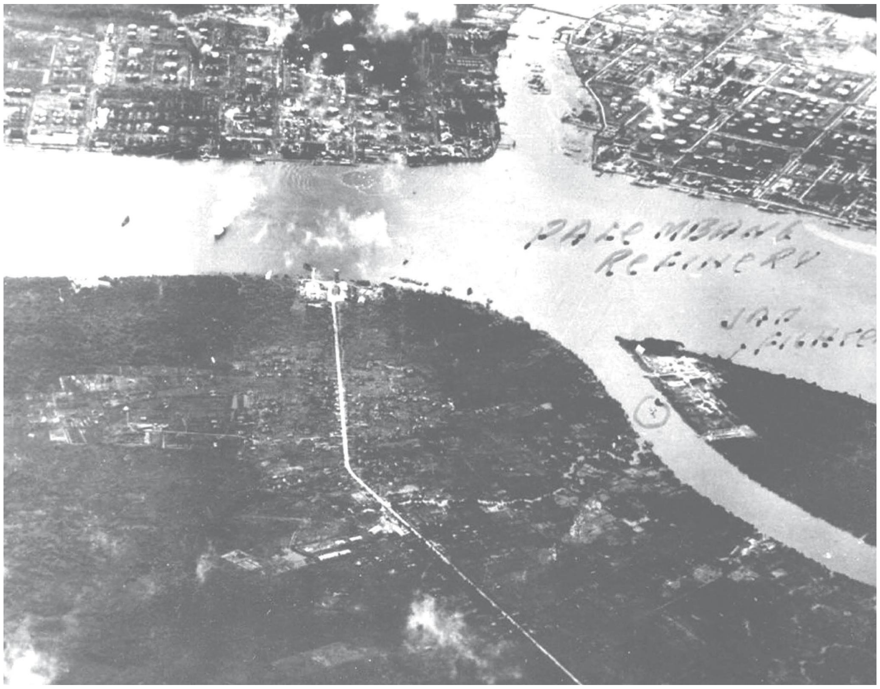
The briefing of air crews from HMS *Illustrious* before the commencement of Operation *Meridian I*, 24 January 1945. Detailed pre-operation briefings were always vital to the success of this key mission, but this was especially true of the Palembang strikes, given the level of opposition expected around the target.



On 29 January 1945, as Vian’s task force recovered the aircraft returning from Operation *Meridian II*, it came under attack by Japanese bombers. Here, anti-aircraft fire throws up spouts of water, as the outer warships of the escort screen fire at the low-flying aircraft, to prevent them from reaching the aircraft carriers.

They were followed just over 30 seconds later by the last group, *Illustrious*’s 854 Squadron. During their attack, one of the Avenger pilots spotted a Japanese ‘Nick’ fighter actually attacking them below the level of the barrage balloons as they made their final approach. Amazingly it was shot down by the ball gun from an Avenger moments after the aircraft released its bombs. After the bombing run, though, as the rest of the squadron headed away over Palembang, another Avenger from *Illustrious* was hit by a second ‘Nick’, and was last seen limping away towards the north, pursued by Japanese aircraft. With all of the strike’s bombs released, their next job was to regroup, and then return to their carriers. The strike leader, Lieutenant Commander William Stuart from *Indomitable*, reported that this was more of a problem than anyone had expected.

After releasing their bombs, the Avengers emerged from Pladjoe in ones and twos, rather than as a cohesive formation. That made them easy prey for the cluster of ‘Nick’ fighters that were waiting for them as they banked away over Palembang city. They were also met with another wall of anti-aircraft fire, from batteries sited on the north bank of the river. This was something intelligence reports hadn’t known about beforehand, and it meant that the bombers assembling over the city and the river had to fly through this fresh barrage of fire.



A reconnaissance pilot's view of the River Musi from over its northern bank, to the east of Palembang city, taken during Operation *Meridian II*. On the far side of the river, divided by the tributary of the Musi, the River Komerine, are the oil refineries of Songei Gerong, and to its right (or west), the larger Pladjoe refinery. The photographic analyst has circled a low-flying Japanese fighter.

Several Avengers were hit during this phase of the extraction, and at least two of them were shot down, crashing a little to the west of the city. Once past that, they were 'bounced' by another group of Japanese fighters. By now all of the British escorts were several miles away. As one of their flight commanders noted, 'we couldn't follow the bombers over the target. All we could do was to wait for them on the other side.' The trouble here was that almost all of the Corsairs and Hellcats were busy in the vast dogfight, and so were unable to break off and come to the aid of the Avengers. So, it was up to the Avenger crews to save themselves.

One of the pilots from 857 Squadron recalled that their pilots had to act like they were flying fighters. One shot down a 'Tojo' fighter that was lining up for a pass on a damaged Avenger, while another British airman told how at least two other Japanese fighters were shot down by the ball turret guns of 820 Squadron's Avengers. It was now 0820hrs. Two more Japanese fighters were destroyed by 1 Wing's aircraft. The surviving Avengers passed over the island in the Musi River that lay upstream of the city, and then began forming up as they flew off towards the south-west. Once back in some semblance of formation their ball turrets could help cover each other, and gradually the pursuing Japanese fighters broke off the fight. At the same time the escorting fighters began forming up around them again, and they continued on towards the waiting carriers in relative safely.

Meanwhile, Major Hay's Corsair and the Photo Reconnaissance (PR) unit's Hellcats circled over the Pladjoe refinery, photographing the target, which was now blazing fiercely, producing a column of smoke several thousands of feet high. To Hay, it looked like the refinery had been badly damaged, and several of its key installations had been destroyed. Then these last aircraft turned away towards their carriers. Incidentally, while the raid had been going on, other PR unit Hellcats from *Indefatigable* had been photographing likely airfield sites around Palembang, as well as recording damage to the ones struck by the 'Ramrod' attacks. This would all help in the planning of the next phase of Operation *Meridian*.

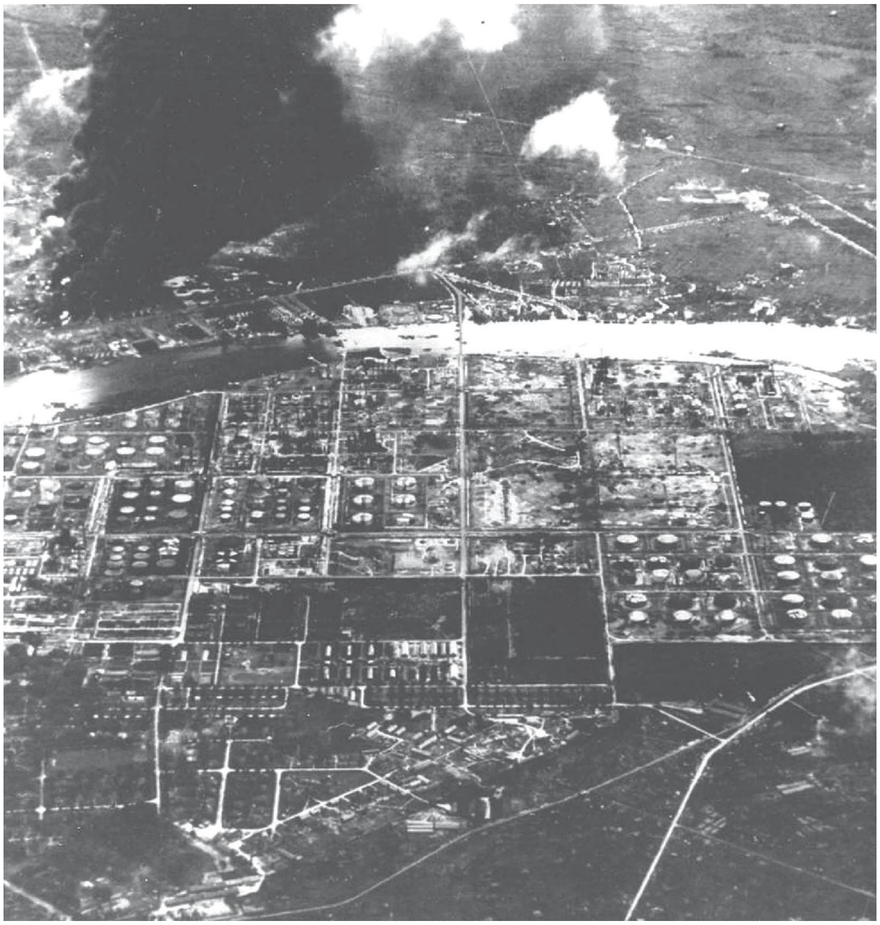
At 0917hrs the now tightly formed-up strike crossed the coast near Krui and Pisang island, and by 0932 the first of the returning aircraft began landing on their carriers. A few of the aircraft, though, were so seriously damaged that this was a real challenge. Others were so badly hit that landing was impossible, and they were forced to ditch in the sea nearby. Vian, though, was expecting this, and destroyers were on hand to rescue their crews. By 1025hrs the recovery was complete. During this time TF 63 had been cruising off the coast, heading north into the fresh breeze during the landing-on operation. During this, Japanese reconnaissance planes were spotted, having tailed the returning strike to the carriers. The Seafires of the CAP headed them off, though, and they withdrew inland.

Then, once the strike was recovered, Vian ordered the formation to head off towards the south-west, away from the coast, at 22 knots. There was a brief alarm at 1415hrs when the task force was 42 miles due south of Engano island. A group of approaching enemy aircraft were detected by air search radar, but the CAP fighters remained in place over the ships, although a flight of the Top Cover element of the screen climbed above the clouds, in an attempt to intercept them. Then, after 15 minutes the enemy fighters withdrew to the north-east, and contact with them was lost. The interceptors were recalled, and TF 63 continued on its way without being disturbed. All that was left was to count the cost of the air strike, to figure out just how effective it had been, and to decide how any lessons learned might be used to alter plans for the next phase of the operation.

## *Meridian II*

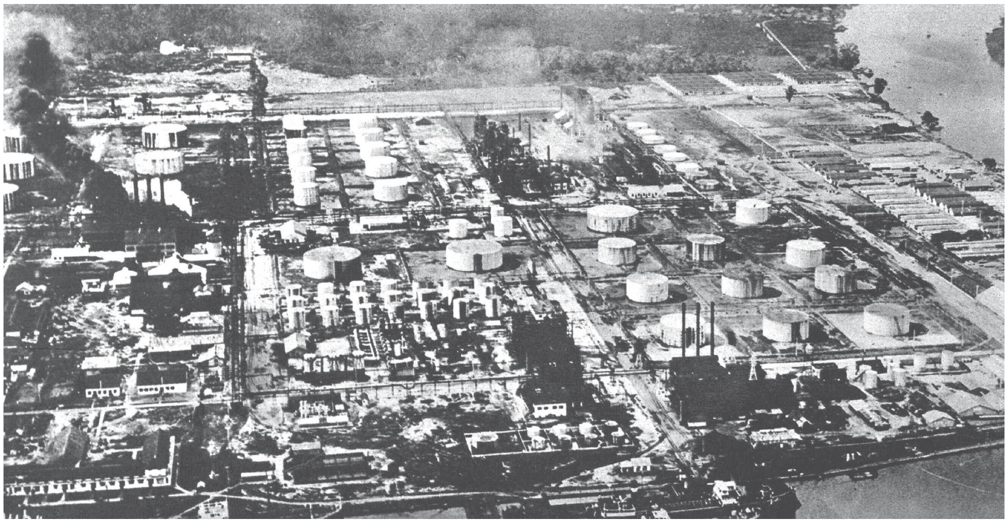
Once safely out to sea, Vian rendezvoused with Force 69 and replenishing began, but the increasingly rough seas caused problems, and fuel oil lines parted during replenishment, as the smaller ships were rolled around by the lumpy swell. At the same time, *Illustrious* and *Victorious* were replenished with aviation fuel (Avgas) by RFA *Echodale*. Due to the bad weather the whole process of refuelling at sea took a total of ten hours, split into two sessions on 26 and 27 January. By 1830hrs on 26 January, though, the operation was complete, and Force 69 withdrew.

While all this was taking place, Vian reviewed the results of the debriefings of the air crews, and the reports of the officers leading the various squadrons and strike leaders. In all, the carrier strike force had lost nine aircraft in the operation – six Corsairs, two Avengers and a Hellcat. Of these, only one of the Corsair pilots had been rescued, having made it as far as the coast. In addition, one of the Seafires of the CAP screen had also crashed into the sea, following a major mechanical failure. Fortunately the pilot had been rescued. That meant total casualties were 12 men, shot down over Palembang. This, though, didn't take into account the two dozen dive bombers and fighters which had been forced to ditch into the Indian Ocean on reaching the task force, or which had been damaged so badly that the aircraft were 'written off' and dumped over the side.



In this photograph taken during Operation *Meridian II* on 29 January 1945, the oil refinery at Songei Gerong can be seen under attack at the top of the photograph. Below it, on the western bank of the River Komerine, is the neighbouring oil refinery of Pladjoe, which was badly damaged five days before, during Operation *Meridian I*.

After *Meridian I*, both Rear Admiral Vian and Major Hay adapted their plans for the next phase, Operation *Meridian II*. The main change was the reduction of the operation's size. In its original form, Hay had planned to launch two strikes on successive days. The first would be a strike on the Songei Gerong oil refinery, while the second would be a mopping up strike, attacking any key targets in the two refineries which had been missed during the previous strikes. Now though, due to a general shortage of both fuel oil for the task force and aviation fuel for the aircraft, Vian decided to drop this third and final strike. So, *Meridian II* would now involve a single operation – the attack on this second Palembang refinery complex.



The oil refinery built and run by Standard Oil at Songei Gerong at Palembang was the second-largest facility of its kind in the East Indies, second only to the neighbouring Pladjoe refinery. This shows the refinery before the war, viewed from the northern bank of the River Musi. On the right is the River Komerine, separating the two refineries. The Songei Gerong refinery was attacked on 20 January 1945, during Operation *Meridian II*.

The other aspect of these modifications was to come up with a way of countering the threat posed by the barrage balloons, the large number of fighters available to the Japanese, and the unexpected array of anti-aircraft defences around Palembang city. Hay also addressed the need for close escort support for the Avengers during and immediately after the attack, and the better coordination of bombing runs over the target, so that these struck almost simultaneously, to reduce the effect of smoke hiding key installations. The 'Ramrod' element of *Meridian I*, while a success, could have been more efficient if the main enemy airfields had been struck simultaneously, to reduce the reaction time by the Japanese at the airfields. Vian also considered it likely that this time the Japanese would mount a large air strike of their own against the fleet before it could withdraw out of range. So, he insisted that the CAP screen was strengthened.

On the evening of 28 January, TF 63 headed back to the Sumatran coast, but early the following morning they encountered a belt of heavy tropical rainstorms, between the task force and the flying-off point. In the pre-dawn darkness the first wave of aircraft were already ranged on the carriers' decks, and so they were fully exposed to the deluge. The flying-off point was reached at 0600hrs – the same one which had been used in *Meridian I* five days before. So, Vian decided to delay the launch for 40 minutes, taking advantage of a gap between the rainstorms. This time the launch went smoothly, with the strike escorts taking off first, followed by the strike aircraft. However, after the rain storm, three were withdrawn from the strike before taking off. One more Avenger ditched on take-off while, during the forming up, four more Avengers were forced to make emergency landings or ditch next to the carriers. That reduced the size of the strike to 40 Avengers. Still, after forming up, the air strike headed off towards its target at 0743hrs, together with all of its escort, apart from the Fireflies, which formed part of the second range of aircraft being launched. It crossed the coast at 0752hrs.

After the strike was launched, the 'Ramrod' fighters took off, accompanied by two Fireflies from *Indefatigable*, which were to make a sweep of Manu airfield. Also in that group was the rest of the Firefly squadron. One of these, though, never took off due to mechanical defects. Also in this second range of aircraft were two PR Hellcats, also launched from *Indefatigable*, which were to photograph the results of the raid. Once again the downpour caused problems, as two of the 'Ramrod' Corsairs had to return to their carriers soon after taking off. Once forming up, the nine remaining Fireflies of the escort raced after the strike formation, catching up with them as they were climbing over the mountains. They would form the Avengers' Bow Cover, while the Hellcats acted as Middle Cover. Of the Corsairs, those from *Illustrious* would be Top Cover, and the *Victorious* fighters acted as Close Cover. Their job was to accompany the bombers during their attack, and stay with them, come what may.

| **Operation *Meridian II*, 29 January 1945 48 strike aircraft, 50 escorts, 25 sweep fighters, 4 reconnaissance fighters (127 aircraft)** | |
|---|---|
| The 'Ramrod' Force | Force X-Ray<br>12 Vought F4U Corsair fighters (1830,1833 NAS/15 NFW *Illustrious*)<br>Force Yoke<br>13 Vought F4U Corsair fighters (1834 NAS/47 NFW *Victorious*) |
| The Main Strike Force | |
| Escorts | 16 Grumman F6F-3 Hellcat fighters (1839, 1844 NAS/5 NFW – *Indomitable*)<br>12 Vought F4U Corsair fighters (1830,1833 NAS/15 NFW – *Illustrious*)<br>12 Vought F4U Corsair fighters* (1836 NAS/47 NFW *Victorious*)<br>10 Fairey Firefly fighters (1770 NAS – *Indefatigable*) |
| Strike Aircraft | 1 Wing<br>12 Grumman Avenger TBFs (849 NAS – *Victorious*)<br>12 Grumman Avenger TBFs (857 NAS – *Indomitable*) |

| | |
|---|---|
| | 2 Wing<br>12 Grumman Avenger TBFs (820 NAS – *Indefatigable*)<br>12 Grumman Avenger TBFs (854 NAS – *Illustrious*) |

Note: * includes the Air Controller's flight

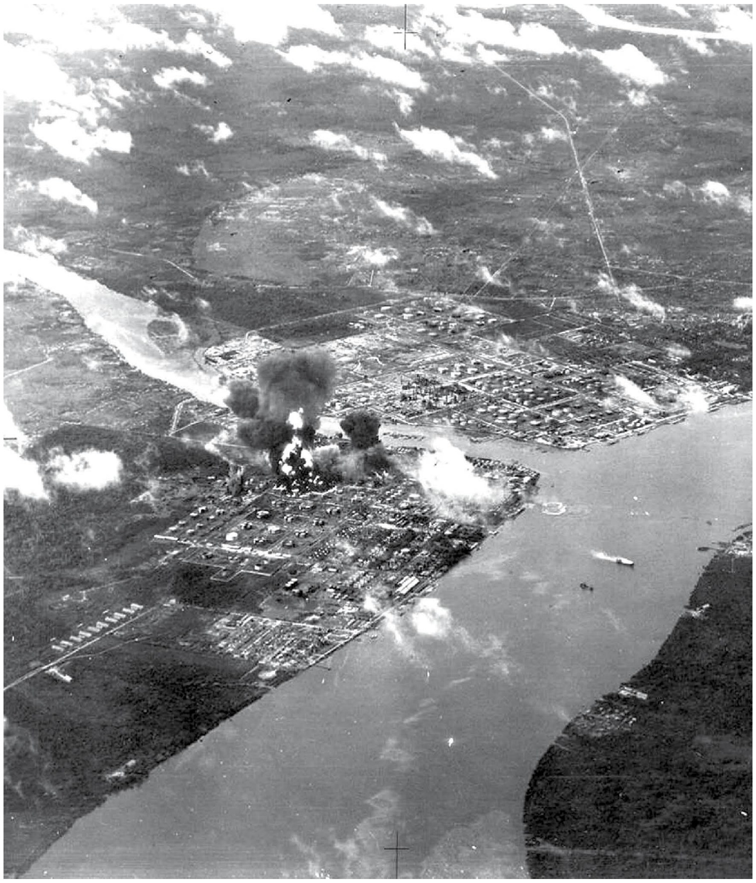
Corsair fighters ranged on the deck of HMS *Illustrious*, shortly before being launched on a 'Ramrod' attack during Operation *Cockpit*, the attack on Sabang on 19 April 1944. The aim of this joint Anglo-American operation was to familiarize the carrier's crew with American-style fast carrier operations.

As expected, the Japanese were better prepared this time, and air patrols were spotted as the strike formation crossed over the mountains. Still, as the strike headed towards Palembang, the 'Ramrod' sweeps moved ahead of the strike, and at 0830hrs they carried out their strafing attacks. Force Yoke from *Victorious* attacked Palembang airfield, but found it virtually deserted, while Force X-Ray discovered the same at Talengbetoetoe. Heavy fire was encountered, though, and a Corsair from *Victorious* was badly damaged, but made it over the coast before ditching, despite being pursued by a Japanese 'Tojo' fighter. In all, the 'Ramrod' attacks were hugely disappointing. Only two or three 'Tojo' fighters and a twin-engined 'Dinah' were destroyed, and at least one other was damaged. The primary aim of the 'Ramrod' sweep was to prevent the enemy from launching fighters to intercept the main British air strike. In this goal then, the sweeps were singularly unsuccessful.

This time the strike aircraft crossed the mountain range at 7,500ft, as Hay had selected a route which avoided the higher peaks. All went well as the strike aircraft headed north-east towards Palembang, and at 0850hrs the

Songei Gerong oil refinery was sighted. So too, though, were two large formations of enemy fighters, patrolling to the south-east and north-west of the target. Major Hay realized that the reason the ‘Ramrod’ sweeps had found the airfields empty was that the Japanese fighters were already in the air. As the Avengers neared their target the Japanese released their barrage balloons, and their two groups of fighters closed in. The Mid Cover escort – the Hellcats from *Indomitable* – attempted to head off one of the enemy groups, while the Top Cover Corsairs from *Illustrious* did the same with the second group.

Soon the sky was filled with a large and confusing swirl of dogfighting fighters. Still, the Avengers continued on their course towards the target, accompanied by the Close Cover Corsairs, with the Bow Cover Fireflies leading the way. This time, the ‘side step’ approach to the target used in *Meridian I* had been modified. Now the Avengers would approach from the south, from two rather than four slightly different directions. Then, instead of heading to the north-west over Palembang city, they would turn to the right, and bank around to the east and south before heading back towards the carriers. Before the Avengers reached the barrage balloons the Fireflies from *Indefatigable*’s 1770 Squadron had used their guns to strafe the balloons, shooting four of them down and damaging several others. They then dived down to use their rockets to pound the anti-aircraft defences around the oil refinery.



The two oil refineries at Palembang in Sumatra, pictured during Operation *Meridian*, 29 January 1945. They both lie on the south bank of the wide River Musi, with Palembang city on its north bank. The closest refinery is the Songei Gerong complex, seen under attack in the photograph. Above it, on the far side of the smaller River Komerine, is the Pladjoe refinery, which was attacked during *Meridian I*.

At 0845hrs the leading group of Avengers from 857 Squadron began its attack, passing between the balloon cables in the process. These aircraft dived from 7,500ft to 2,500ft during their approach, and released their bombs with impressive accuracy. As they did, though, the other three squadrons were attacked by a group of 'Oscar' fighters. The Avenger crews, however, were committed to their dive, and could do nothing about them, apart from engaging them with their ball turrets. One Avenger, piloted by Lieutenant Commander Mainprice, struck a balloon cable which sheared off the bomber's wing. It crashed on the refinery and exploded, killing all three crew. A second Avenger from 2 Wing did the same as it followed the first squadrons a few seconds later.

Again, despite all these distractions the four squadrons released their bombs over the target, then banked away over the river to the east. During this final attack, the Close Cover Corsairs from *Victorious* had climbed above the barrage balloons, and flew over the target before diving down again to rejoin the bombers on the far side of the objective. The Avengers were lucky to escape so lightly – at least during this stage of the attack. Afterwards, one pilot recalled how his Avenger had been hit by fire from a Japanese fighter as he completed his bombing run, and as he turned away he saw flames shooting out of his port wing. He made it to the coast, though, where his Avenger ditched next to the destroyer *Whelp*. Immediately after releasing his bombs, another Avenger pilot saw an enemy fighter shoot past him. He instinctively opened fire, and the enemy plane crashed in flames.

When this Corsair of 1834 NAS landed back on *Victorious* after suffering engine problems at the start of Operation *Meridian II*, her drop tank detached and caught fire. Although spectacular, this problem was soon dealt with by firefighters, and the pilot was unharmed.

Watching the bombing runs, Major Hay described them as being ‘truly impressive’. It took an amazing combination of skill and courage to dive-bomb a target in those conditions, but the young air crews had pulled it off. Songei Gerong refinery had been badly hit, and like neighbouring Pladjoe four days before, a huge column of oil-black smoke rose over the refinery. Now it was all about making it back to the carriers. This, of course, wasn’t so easy. The Avengers were attacked by Japanese fighters coming out of the sun as they banked away after their attack, but although several were damaged, most of the bombers survived until their close cover could rejoin them. One Avenger, though, crashed near the banks of the river, while another went down to the south-east of the city, as the two Wings banked round onto the course that would take them back to the carriers.

The Japanese attacks continued, and the Avengers fought back as best as they could, supported by a growing number of Fleet Air Arm fighters. One Avenger from *Victorious* even chased a ‘Tojo’, and shot it down over the jungle, while three more were downed by the escorting Fireflies, which once again had formed up as Bow Cover. By 0900hrs the strike force had fully reformed, and was approaching the mountains. By then the Japanese fighters had broken off, and the battered strike aircraft were left alone. Inevitably, though, some of the aircraft were so badly damaged that reaching the carriers was still something of a challenge. Shortly after 1000hrs the task force was reached, and landing-on began, with the most severely damaged aircraft given priority. Some were forced to ditch in the sea rather than attempt a landing. Other aircraft were ditched over the side, as they were too badly damaged to repair. Still, given the damage suffered, losses could have been higher.

In all six Avengers had been shot down or wrecked by balloon cables during the attack, or had crashed while attempting to return home. Two Corsairs and a Firefly were also shot down during the dogfight. Several more Avengers and Corsairs were forced to ditch, and one wounded fighter pilot was killed in the process. That added another 35 aircraft to the total of losses. Collectively it was a heavy price to pay. However, Vian took some consolation from the results. The oil refinery had suffered major damage, with the main powerhouse and distilling plants destroyed, along with dozens of oil storage tanks. In effect, the refinery had been put out of action for several months, if not longer. This, then, together with the similar damage inflicted on Pladjoe, was exactly what Admiral Nimitz had requested. Despite the cost in aircraft and crew, the British Pacific Fleet had done exactly what had been asked of them.

This wasn’t the end of the operation. At 0917hrs, just as the strike was returning to the carriers, a lone enemy aircraft was spotted by patrolling Seafires of *Indefatigable*, which were providing the carrier’s CAP screen. They climbed to intercept it, but the twin-engined ‘Dinah’ escaped into the clouds. Then, another flight appeared at 0939hrs, just as the returning strike aircraft were crossing the coast. This time, though, while the rest escaped, one ‘Dinah’ was pursued out to sea, and was shot down by a Seafire, some 28 miles west of the task force. Vian, though, was sure it and its predecessor had sent a sighting report to their airfield. He was now in no doubt that the task force had been spotted by the enemy. That meant that a strong enemy air attack could be expected. Given their use off the Philippines, he fully expected this might involve an attack by a Japanese Special Attack Squadron. That meant a kamikaze strike.

HMS *Euryalus* passing through the Suez Canal in December 1944, on her way to the Indian Ocean. These Dido-class anti-aircraft cruisers proved exceptionally useful for fleet defence, and were usually deployed close to the fleet carriers. She arrived in time to take part in Operation *Meridian*, but on 29 January, during an air attack, two of her 5.25in shells struck *Illustrious*, killing 12 of her crew and injuring 21 others.

Sure enough, at 1026hrs, as the strike aircraft were landing, 12 enemy contacts were detected on air search radar, approaching the task force from the north. The CAP screen was reinforced by a flight each of Corsairs and Hellcats, and when these aircraft were identified as twin-engined bombers, a group of Corsairs and Seafires were sent to intercept them to the east of Engano island. In fact the sightings had been wrong. The approaching squadron of bombers turned out to be two enemy fighters, out searching for the fleet. The Japanese fighters were driven off, but one of the Corsairs crashed, after developing engine failure. Then, at 1028hrs more contacts were detected 40 miles to the west but these never approached the fleet, and flew on to the north. It was clear now that the Japanese were still looking for them, which meant that the task force might still remain undetected.

Shortly before noon a mixed force of six Japanese ‘Betty’ and one ‘Helen’ bombers were detected 30 miles to the south, and seven Seafires were sent to break up the enemy formation. This was achieved, but not before the task force opened up an anti-aircraft barrage, to deter the enemy bombers from closing with it. This didn’t work, and the bombers made a low-level run towards *Illustrious* and *Indefatigable*. Vian, fearing a torpedo attack, ordered the fleet to take evasive action, and in the confusion of the attack two 5.25-inch shells fired by *Euryalus* struck *Illustrious*, killing 12 men and wounding 21. The barrage achieved nothing, though, apart from the shooting down of the ‘Helen’, but the remaining six bombers were shot down by the CAP screen.

That though, was the last attack of the operation, and Vian ordered the fleet to withdraw at speed towards the north-west. Shadowing Japanese aircraft were detected on radar, but these kept their distance, and all contact with the enemy was lost at sunset. Still, Vian continued on his course, as if heading towards Ceylon. However, this was only a ruse. Under cover of darkness he turned south, and the following day he effected another rendezvous with Force 69, who refuelled the task force. Then, at 1315hrs, Vian ordered TF 63 to head south towards Fremantle. This would be the last they would see of Sumatra. The British carrier strike force, battered but successful, was now on its way to play its part in another theatre, and to fight alongside its American counterparts. Thanks to all the lessons learned in the Indian Ocean, and especially during Operation *Meridian*, it was now a force that could fight alongside its allies.

# ANALYSIS AND CONCLUSION

In the spring of 1944, the British Eastern Fleet was a force which lacked the warships and support train it needed to achieve very much in the Indian Ocean. Still, in *Illustrious* it had a fleet carrier capable of carrying out attacks on the enemy, and the makings of what would become a powerful carrier strike force. When she arrived in Trincomalee on 31 January 1944, *Illustrious* had two air wings embarked, one equipped with Barracudas and the other of Corsairs. It was really too small a force to achieve much, and worse, her crew lacked any real experience of multi-carrier operations, or the launching of large-scale airstrikes. This lack of experience in what the Americans called ‘fast carrier operations’ was a major stumbling block – more so than the fact that, as it stood, the Eastern Fleet only had one carrier.

A damaged Grumman Avenger from 857 NAS which was forced to ditch in the sea close to her carrier HMS *Indomitable* after returning from Palembang, 24 January 1945. A number of seaboats were already standing by the carrier, and this air crew was quickly rescued.

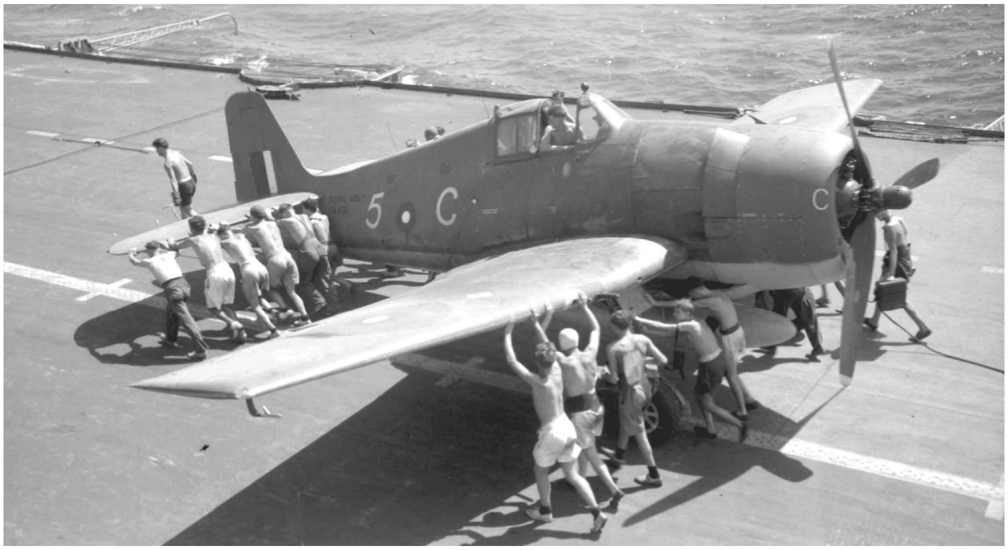
Nevertheless, Admiral Sir James Somerville, the commander-in-chief of the Eastern Fleet, knew that the British Admiralty was about to reinforce his command, and provide him with the beginnings of a fully-fledged carrier strike force. The previous December, they had also sent him a man to command this nascent force, Rear Admiral Clement Moody. Before the war began Moody had been given command of a carrier, and then went on to direct the Admiralty's Naval Air Division. After that he became the flag officer commanding the Home Fleet's own small force of aircraft carriers. His arrival in Ceylon boded well for the future. Now, Somerville had the commander he needed to help him forge a striking force that would become the key part of his new fleet.

Somerville soon realized, though, that neither Moody, Captain Robert Cunliffe of *Illustrious* or any of his carrier's air crews had the kind of experience they needed to wade into battle alongside their American allies. He realized that if the Eastern Fleet were to achieve anything in the Pacific War, then it would have to learn new skills from its American allies. Fortunately, the British had a mentor. In March 1944, the aircraft carrier USS *Saratoga* arrived in the Indian Ocean, under the command of Captain Cassady. He and his crew were experts in the kind of warfare which had won the US Navy an impressive series of victories in the Pacific War. Now, in what became known as Operation *Diplomat*, they would pass on these hard-earned skills to the British.

In a short but intensive few days, the Americans would show the Fleet Air Arm just how they did things. These skills ranged from aircraft handling to the speedy launching of aircraft, the forming up of large air strikes and the way the US Navy organized its CAP screen around a task force. This wasn't just the handing over of copies of manuals, or the giving of dry lectures. The crew of *Saratoga* went out of their way to explain everything to their allies. This proved to be a real turning point for the Royal Navy. What was even better was that *Saratoga* and her crew would then spend some time operating alongside *Illustrious*, to help turn the theory into practice.

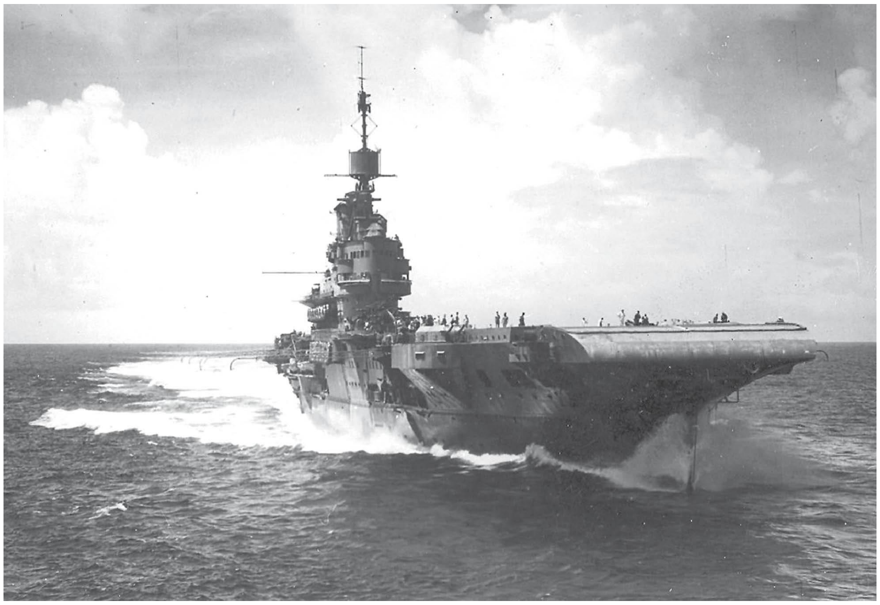
These would mark the start of what Somerville and Moody dubbed a series of 'working up' operations – the phrase the Royal Navy used for the gearing up of a warship or a naval force for war. That, effectively is exactly what they were doing – gaining sufficient experience of these newly learned skills that they could greatly improve their effectiveness. The Royal Navy were no slouches in naval warfare, and had been the first to develop the aircraft carrier. The Americans, though, had taken carrier operations to a whole new level – one that was tailor-made for naval warfare in the vastness of the Pacific. This was tied to other skills too. Perhaps the most important of these was refuelling at sea – something the Royal Navy had rarely done, as it usually operated within endurance range of a friendly base. In the Pacific though, where distances were so much greater, refuelling at sea (RAS) became a vital part of naval operations. So, this too was something which Somerville, Moody and all the officers and men of the Eastern Fleet had to master.

The ultimate aim, of course, was to reach a level of ability where the Royal Navy could work seamlessly alongside its American allies. More than any other area, this meant the ability to conduct fast-carrier operations of the kind perfected by the US Navy during three long and gruelling years of war. For the men of the *Illustrious*, this was only the start. The two operations she carried out with *Saratoga* – Operation *Cockpit* in April and Operation *Transom* the following month – were merely the start of this long process of ‘working up’. After *Transom*, the joint Anglo-American attack on Surabaya in Java, the British were left to perfect these new-found skills on their own. Captain Cunliffe and the crew of *Illustrious* then had to pass on their skills to others – the officers and men of the carriers sent out to the Indian Ocean to reinforce the Eastern Fleet. Accordingly, Somerville and Moody then continued this programme of ‘working up’ operations, so that the whole carrier strike force could up its game and prove that the Eastern Fleet was now ready to play an important part in the Pacific campaign.



A large aircraft-handling team from HMS *Indomitable* range a Hellcat into position on the after end of the carrier’s flight deck. The fighter’s tail wheel is guided by a handler with a steering arm, while another of the team in the cockpit also helps guide the aircraft towards its ‘spot’.

Throughout 1944, the men of four British fleet carriers – *Illustrious*, *Indefatigable*, *Indomitable* and *Victorious* – developed their abilities through five more operations: *Pedal*, *Crimson*, *Banquet*, *Light* and *Millet*. This meant that by late November, when the main fighting elements of the Eastern Fleet were rebranded as the British Pacific Fleet, they were finally ready to go over onto the offensive. They also had new leaders – Admiral Somerville was succeeded by Admiral Fraser, and Rear Admiral Moody by Rear Admiral Vian. This was the moment when Moody's hard work paid off. Admiral Fraser declared that the days of 'working up' were now over. From that point on the carrier strike force of the British Pacific Fleet would take the war to the enemy in earnest.



The fleet aircraft carrier HMS *Illustrious* joined the Eastern Fleet in January 1944. She would form the basis of Britain's carrier strike force in the Indian Ocean, and would lead the way in developing the Royal Navy's adoption of American-style fast carrier operations.

That was when Operation *Outflank* began. This wasn't so much an operation as a major air campaign, waged against the Japanese in Sumatra. The aim was strategic – denying the Japanese the oil they needed to continue the war. This campaign began in December 1944, with Operation *Robson*. Bad weather, though, prevented it from being the decisive strike that Fraser and Vian had hoped. So, in early January it was followed by Operation *Lentil* – a strike against a major oil production centre in north-east Sumatra. This was a success, and paved the way for the climax of Operation *Outflank*. This was Operation *Meridian*, a series of devastating attacks designed to cut off the flow of Japanese oil by wrecking its main production centres in Sumatra, in the south of the island, clustered around the city of Palembang. This then, would be the ultimate test for the air crews of these four British carriers.

What followed were two air strikes, codenamed Operation *Meridian* – the largest Britain's Fleet Air Arm had ever launched. The two oil refineries at Palembang were vital to Japan, which together produced 80 per cent of the oil Japan used to keep its warships and aircraft operational. Consequently, such an important strategic asset was extremely well defended, both with anti-aircraft defences and fighter aircraft. In the two Palembang raids, Vian's carrier strike force was really stirring the hornet's nest, so these operations were extremely costly to the Fleet Air Arm, both in aircraft and airmen. However, they were also hugely successful. The two oil refineries were put out of action for several months, and afterwards, what had once been a real flow of oil to power the Japanese war machine was now reduced to a trickle. By the spring of 1945, when production resumed, it was less than a third of what it had been before Operation *Meridian*.

Just as importantly, by achieving such a hard-won success, the British Pacific Fleet's carrier strike force had shown that it was now more than worthy to fight alongside its veteran American allies in the climax of the Pacific War. So, Operation *Meridian* was the end of one campaign, fought in the Indian Ocean, and the beginning of another, even more important one, which would be played out in the Central Pacific. As a result of its successes in Sumatra, the Royal Navy would be there when the tide of war reached the very shores of Japan itself. Today, the British Pacific Fleet has often been called 'The Forgotten Fleet', as its achievements have been overshadowed and overlooked, while the US Navy basked in the warm glow of victory. This fleet, though, represented the Royal Navy at its best, and at the height of its power. That alone was worth the long and costly struggle that it took to reach that pinnacle.

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# ABOUT THE AUTHOR

Angus Konstam is a Fellow of the Royal Historical Society and has written widely on naval history, with well over a hundred books in print. He is a former Royal Navy officer, maritime archaeologist and museum curator, who has worked in the Royal Armouries, Tower of London, and Mel Fisher Maritime Museum. Now a full-time author and historian, he lives in Orkney.

# ILLUSTRATOR

Edouard A. Groult grew up inspired by watching historical documentaries with his father and developed a fascination for historical and fantasy art. Following art studies in both Paris and Belgium, he worked as a concept artist in the videogame industry and in recent years has also undertaken historical commissions while working as a freelancer for historical magazines. He lives and works near London.

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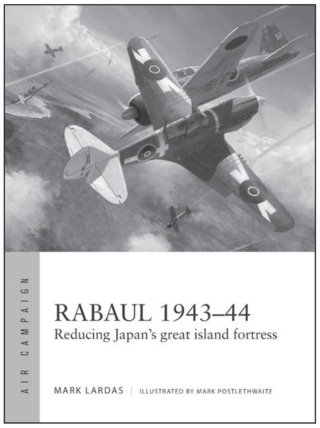
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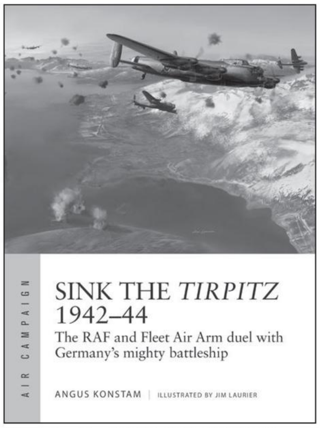
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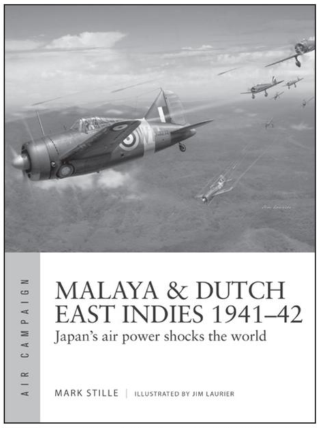
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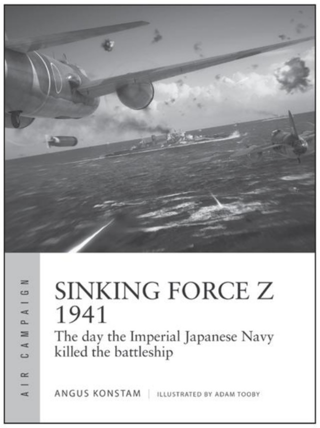
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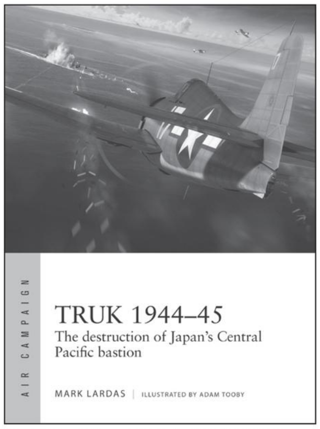
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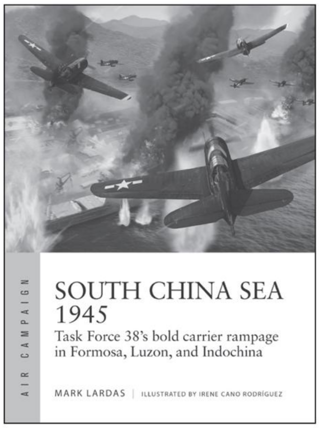
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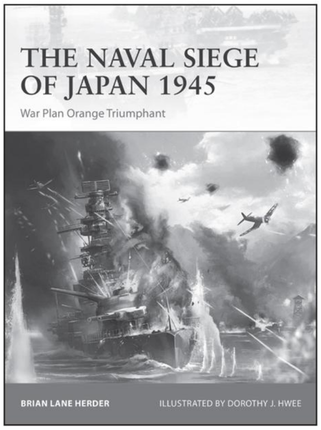
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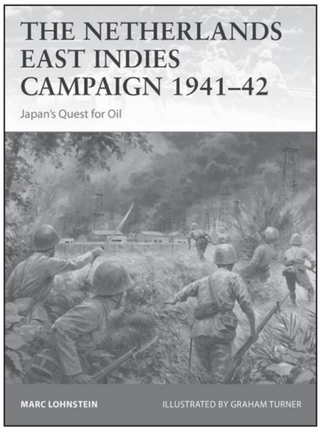
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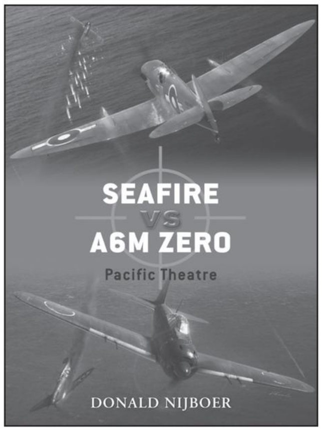
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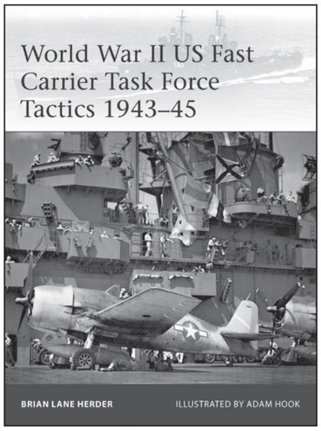
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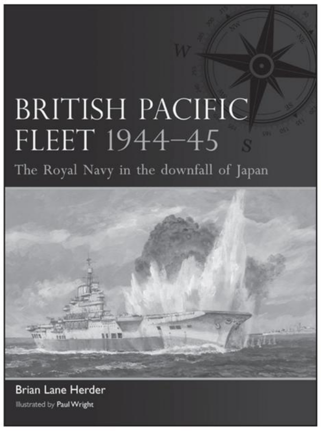
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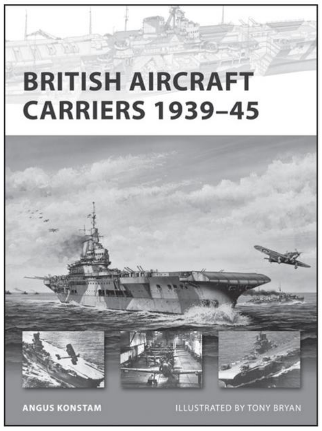
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